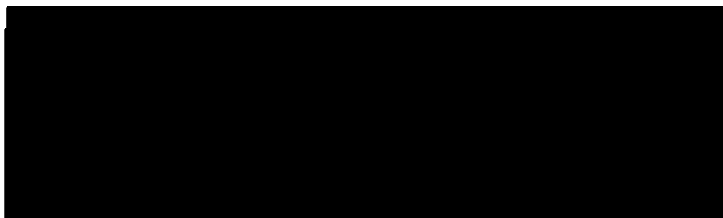


Q. Do you wish to add anything here not included in your statement in Exhibit A?

A.

Q. Do you want to submit the statements in Exhibit A to the Maine Public Utility Commission for consideration in its pending proceeding to investigate the safety of smart meters?

A. Yes. I submit the attached sworn testimony in support of complainants Ed Friedman, et al in their case before the Maine PUC as evidence that smart meters are not safe.



STATE OF MICHIGAN  
WASHTENAW, ss

January 28, 2013

Personally appeared the above-named [REDACTED] and stated under oath that the foregoing Affidavit made by her is true and based upon her own personal knowledge, information or belief, and so far as upon information and belief, she believes the information to be true. Before me,

Kathleen A Mulligan  
Notary Public

Kathleen A Mulligan  
Name Typed or Printed

My Commission Expires: 11/28/14 9-21-14



1  
2  
3 **EXHIBIT A**  
4  
5  
6  
7

8 STATE OF MICHIGAN  
9

10 BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION  
11

12 In the matter of the application and request )  
13 of the DETROIT EDISON COMPANY seeking )  
14 approval and authority to implement its ) Case No U-17053  
15 proposed Advanced Metering Infrastructure )  
16 opt out program. )  
17  
18  
19  
20  
21  
22  
23

24 QUALIFICATIONS AND DIRECT TESTIMONY OF  
25   
26  
27

QUALIFICATIONS OF [REDACTED]

1 Q. Do you swear that the testimony you are about to give is the truth, the whole truth,  
2 and nothing but the truth?

3 A. I do.

4 Q. Please state your name, address and contact information.

5 A. My name is [REDACTED]  
6 [REDACTED]

7 Q. On whose behalf are you testifying?

8 A. That of Intervenors Linda Kurtz and Cynthia Edwards.

9 Q. What are your qualifications to testify?

10 A. I take my electric service from Detroit Edison. I have been affected by the smart meter  
11 installation both in terms of my health and in terms of earning an income.

DIRECT TESTIMONY OF [REDACTED]

1 Q. What is the purpose of your testimony?

2 A. To provide information that establishes that there is a need for a no-fee opt-out and the  
3 need for an analog meter option. To provide information that may help the Commission in  
4 determining whether smart and digital meters create certain kinds of economic, medical,  
5 social, or other harm or hardship, as outlined in Intervenor Linda Kurtz's Petition for  
6 Intervention, to some or all persons such that Detroit Edison and the Commission must not  
7 require those who are or who are likely to be so harmed to have a smart or digital meter  
8 placed on their home or place of business or to be otherwise deprived of rights and liberties,  
9 as outlined in Intervenor Kurtz's Petition for Intervention, by the deployment of the  
10 advanced metering infrastructure, smart meters, or digital meters, and, in the alternative,  
11 that such persons must be able to avoid such harm to their person and property without  
12 being charged a fee.

13 Q. How long have you lived at your current residence?

14 A. I have lived in my home since 1981, for 31 years. I own my home.

15 Q. What do you do for a living?

16 A. I worked as a [REDACTED] for 18 years. For the past 13 years I have worked as a [REDACTED]

17 Q. When was a smart meter installed on your home?

18 A. July 18, 2012.

19 Q. Did you know it had been installed on your home?

20 A. No, I didn't. Later, when I couldn't sleep, I called DTE, and they told me the date it had been  
21 installed.

22 Q. Something led you to call DTE. What was that?

23 A. Never in my life have I had a problem sleeping. "When my head hits the pillow," as the  
24 saying goes, "I'm out like a light." But now I was lying awake for hours without falling  
25 asleep, night after night. 12 am, 2 am, 4 am, I'm still awake! I wondered, "What's going on?"

26 I talked to a friend, telling him my dilemma, and he told me that the smart meters could  
27 alter your sleep. "What are smart meters?" I asked. I had never heard of them.

28 Q. So prior to your conversation with your friend, you knew nothing about smart  
29 meters?

30 A. No.

31 q. So you weren't anxious about smart meters and thus experiencing insomnia?

1 A. No. Like I said, I had never heard of them before. Like I said, my entire life, I have slept like a  
2 rock—that is until a smart meters was installed on my home.

3 Q. **Prior to talking to your friend, did you know that a smart meter had been installed**  
4 **on your home?**

5 A. No. I was never contacted or asked if this meter could go on my home. After I talked to my  
6 friend, I went to look to see if a smart meter had been installed on my home. It had been. I  
7 contacted DTE immediately, this was some time in August, asking them to take this meter  
8 off my house. They said I was the first person to call and complain about the smart meter  
9 causing any problems. The representative said she was sure I must have had problems  
10 sleeping before.

11 Q. **What did DTE tell you they would do?**

12 A. They said they could not take the meter off my house and at this time there was no opt-out  
13 program but they were working on it.

14 Q. **What did you do next?**

15 A. I continued to call and call and call them and said, "Please take this meter off my house. I  
16 can't sleep, I can't work." I called at 3 a.m. one night when I couldn't sleep. Like the first  
17 representative, this representative said he'd never heard of such a problem. I finally set up  
18 a tent in my backyard, after weeks of not sleeping. I slept really well, not quite as well as  
19 when I was sleeping in my own bed in my own home before I had a smart meter, but no one  
20 sleeps quite as well in a tent as in their own bed. It has been very stormy and windy this  
21 last month, and about three weeks ago the tent blew over on me at about 3 a.m. It covered  
22 me so thoroughly, and was so heavy, I thought I was going to suffocate!

23 Q. **Did you continue to sleep in the tent?**

24 A. I moved back into my house because every time I set the tent up, it blew back down the  
25 winds were so high. My nights are now sleepless.

26 Q. **Do you experience any other health problems or symptoms from the smart meter?**

27 A. At night, I lie there feeling a vibration going through all of my body and my ears ring loudly.  
28 [REDACTED] is really hard work, and I wonder some days how I am going to make it. The  
29 sleep deprivation makes me extremely fatigued and worn out. Day after day after day of  
30 exhaustion has made me feel suicidal at times. I just don't know how I can keep going on! I  
31 have felt such a fatigue and depression. This is totally affecting my personality and thus my  
32 friendships and other relationships. This is affecting my productivity at work – I am so  
33 tired! My memory has been affected – I will be talking to a person and totally go blank and  
34 can't finish my sentence. I have pain in my body I haven't had before—I feel an achiness  
35 around my joints. This has been progressive. In the last two days, I have begun feeling an  
36 achiness around the vertebrae in my back.

1 I feel a physical agitation in my body. I work outside all day. I come home, and within a  
2 couple hours, I feel so agitated in my body. When I was able to sleep in my tent, I would look  
3 so forward to going outside. People would say, "[REDACTED] you can't sleep out there, it's so cold."  
4 And I would be so happy because I didn't feel that agitation outside and I could sleep.

5 I experience ringing in my ears whenever I am in any building with a smart meter. At one  
6 client's house, the ringing in my ears was so loud I couldn't believe it. Buildings with  
7 fluorescent lights are particularly bad.

8 **Q. How do you know it is smart meters that are affecting your health?**

9 A. I know because I never had a problem before smart meters.

10 **Q. Did you have any health problems prior to the installation of smart meters? If so,**  
11 **what were they and when did they begin?**

12 A. Hypothyroidism. This was diagnosed about twelve years ago.

13 **Q. Does this cause fatigue?**

14 A. No, because I take medication for it.

15 **Q. So could this be what is causing you to have trouble sleeping at night?**

16 A. No, because I never have had trouble sleeping, that is, not until the smart meters were  
17 installed. The fatigue was caused by the hypothyroidism, not by lack of sleep.

18 **Q. Any other health conditions?**

19 A. I feel like some asthma, though it's never been diagnosed.

20 **Q. Have you had sensitivity to any other electrical or wireless devices other than smart**  
21 **meters?**

22 A. Yes. I am extremely affected by my cell phone. I feel agitated when I am using it, and I have  
23 ever since I got it five years ago. I have started to use the speaker phone rather than hold  
24 the phone against my ear. That helps slightly.

25 **Q. You said you have contemplated suicide after experiencing day after day of unending**  
26 **fatigue since smart meter installation. Have you every contemplated suicide prior to**  
27 **this?**

28 A. Never. Definitely never. But after I was so exhausted after not sleeping for days, I was  
29 going to work one day, completely exhausted. I thought, "How can anyone go on day after  
30 day like this without sleeping?" I thought, "Now I know why people think about suicide.  
31 People that don't sleep, how do they keep on going?"

32 **Q. Have the health effects you experience as a result of smart meters affected your**  
33 **ability to work and earn a living? If the answer is yes, describe how.**

1 A. I have been late for work because I have needed to try to rest—I guess I can't really call it  
2 sleep anymore. I've never actually missed work, but I have been late for work. My  
3 productivity is less. I've never been late for work in the past.

4 **Q. Have the health effects you experience as a result of smart meters affected your**  
5 **ability to interact socially with others? If the answer is yes, describe how.**

6 A. Yes. When you are so tired, you don't even want to socialize with anyone. I feel angry, so  
7 fatigued. All I think about is sleeping.

8 It's negatively affected my most intimate relationship in the last few months. It's had a huge  
9 impact. The lack of sleep has made me so fatigued and angry, and it's hard to love someone  
10 when you feel that way.

11 **Q. Have the health effects you experience as a result of smart meters affected your**  
12 **ability to access public services, such as the public library, government offices? If the**  
13 **answer is yes, describe how.**

14 A. Yes, because going into any building with a smart meter, I feel agitated.

15 **Q. Have the health effects you experience as a result of smart meters affected your**  
16 **ability to freely assemble outside? If the answer is yes, describe how.**

17 A. No.

18 **Q. Have the health effects you experience as a result of smart meters affected your**  
19 **ability to access religious or spiritual services? If the answer is yes, describe how.**

20 A. My spiritual life is outside, so no, it hasn't.

21 **Q. Have the health effects you experience as a result of smart meters affected your**  
22 **ability to freely access health services? If the answer is yes, describe how.**

23 A. No, but I haven't been to any health-care facility since smart meters were installed, except  
24 for the UM, where they don't have smart meters. Given how I react in buildings with smart  
25 meters, I expect that it will affect me once I do need to see a health-care professional who is  
26 in a building with smart meters.

27 **Q. Have the health effects you experience as a result of smart meters affected your**  
28 **ability to perform one or more major life activities not already mentioned? If the**  
29 **answer is yes, describe what activities and how the effects have affected your**  
30 **performance of these activities.**

31 A. Interacting with others. Reading, because I get so agitated in my body and I can't  
32 concentrated. I used to love to read, and I kept wondering, "Why can't I read now." Inability  
33 to think, concentrate, comprehend. Sleeping, obviously. Performing manual tasks because  
34 being in the house is so hard—how can I clean my house, wash my dishes, etc when I just  
35 need to get out of my house.

1 As far as physical labor goes, I am more tired, it's harder to be productive.

2 Breathing—it has been harder for me to breathe in the house. I have asthma.

3 My memory is a lot worse. I have to write everything down now. My son keeps telling me,  
4 “Mom, I told you that yesterday.”

5 **Q. Has your ability to live in your home been affected by the installation of smart**  
6 **meters?**

7 **A.** Totally. I think that has been covered.

8 **Q. Is there anything else you wish to say about how smart meters have affected your**  
9 **health and/or your life?**

10 **A.** Yes. My sixteen-year-old son, [REDACTED] sleeps a couple feet away from the meter. He has  
11 juvenile diabetes. We just went to see his endocrinologist, Dr. [REDACTED] at the University of  
12 Michigan Medical Center's Hospital on November 1. He's been going there for 2 years, since  
13 his diagnosis when he was 14. There is this number called A1c. There's this blood test they  
14 give the kids called A1C. It's a blood test that shows what his blood sugars combined were  
15 for the last three months. His numbers were always below 7. His last appointment, they  
16 were 6.8. [Exhibit 1.] The doctors have always been so happy because they want these  
17 numbers to always be below 7.

18 I have [REDACTED] on a very clean, organic diet and he exercises playing hockey and lacrosse, all of  
19 which help keep his blood sugars at a good level. On November 1, his A1c was taken, and the  
20 level had shot up to 9.5. [Exhibit 1.] The doctor if anything had changed as far as his diet  
21 and exercise. Nothing had. It's very clear that his blood sugar levels have shot up because of  
22 the smart meters. Nothing else in his life has changed, and the levels have been consistent  
23 for two years. There's no other explanation. When levels are above 7, it wreaks havoc on the  
24 body. Many things can happen to the body, to his limbs, to his organ.

25 Dr. [REDACTED] has sent a letter to DTE describing her findings and stating that the smart meter  
26 needs to be taken off the home.

27 From a *Prevention Magazine* article that I read, I have learned that the EMFs emitted by  
28 smart meters can elevate blood sugar levels. They discussed work by Dr. Magda Havas of  
29 Trent University, whose research has shown that voltage transients can elevate blood sugar  
30 levels of diabetics. [Attached as Exhibit 2. Pertinent area is on page 6 of Exhibit 2,  
31 highlighted in yellow.]



STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application and request )

of the DETROIT EDISON COMPANY seeking )

approval and authority to implement its )

Case No U-17053

proposed Advanced Metering Infrastructure )

opt out program. )

EXHIBITS OF



# EXHIBIT 1

001/006

Printed 11/8/12 4:03 PM

11/1/2012 8:00 AM Office Visit  
MRN: 040245480

Description: 16 year old male  
Provider: [REDACTED]  
Department: Mh Ped Endocrinology

Diagnoses	Reason for Visit
Diabetes mellitus - Primary 280.00 Long-term insulin use V58.67	Diabetes Mellitus

## Vitals - Last Recorded

BP	Pulse	Temp(Src)	Ht	Wt	BMI
114/61	58	97.7 °F (36.5 °C) (Oral)	1.816 m (5' 11.5")	68.8 kg (151 lb 10.8 oz)	20.86 kg/m2

## Progress Notes

MD 11/5/2012 8:38 AM Signed

[REDACTED] is a 16 year 10 month old boy who is seen in Pediatric Diabetes Clinic for follow-up of Type I diabetes. He was diagnosed with Type I diabetes in May 2010. He is accompanied by his mother.

## MEDICATIONS:

Lantus 22 units at bedtime  
Novolog: Insulin/Carb ratio 1:13 for breakfast, lunch, and dinner  
correction 1:100>150 at breakfast and lunch

Other relevant medications: None

INTERVAL HISTORY: No interim illness. Over the summer they attended an intro to pump class. He said he was interested in the pump but never completed the workbook. They did not bring blood sugar log to review. He reports checking 3-4 times/day. He states that he has low BG in the 70's after hockey practice in the afternoon. He treats these with power bars, and we discussed the need for him to have a fast acting sugar with him. He will not have any periods where he is not in a sport from this point. He has is not driving often. Mother is very concerned that a smart meter placed on their home by the utility company over the summer has caused a worsening of his BS.

History of severe hypoglycemia: No.

History of significant # of (non-severe) hypoglycemic episodes: non-reported 2-3 per week.

Occasional 50-60 after hockey practice. He feels shaky and has a granola bar.

History of DKA: None since diagnosis

History of DM related hospital admission: None since diagnosis

## REVIEW OF SYSTEMS:

10 systems reviewed: Yes reviewed 10/14 see pediatric diabetes outpatient note imaged document.

SOCIAL HISTORY: Parents are divorced. Both brothers are away at college. He is in 11th grade. Active in hockey and LaCrosse.

## PHYSICAL EXAMINATION:

BP 114/61 Pulse 58 Temp(Src) 97.7 °F (36.5 °C) (Oral) Ht 181.6 m (82%) Wt 68.8 kg (64%)  
BMI 20.86 kg/m2 (44%)

In no acute distress.

External ears and canals are normal.

Nasopharynx is patent.

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Page 1 of 6

Oropharynx has moist mucous membranes and no lesions.  
Neck is supple; no lymphadenopathy or masses. Mildly enlarged thyroid with normal texture.  
Heart has a regular rate and rhythm, without significant murmur.  
Lungs are clear to auscultation; no wheezes or rhonchi.  
Abdomen has positive bowel sounds. It is soft and nontender, without organomegaly or masses.  
Extremities are warm and dry, without abnormalities.  
Normal tone, bulk, and strength.  
Acanthosis nigricans : No  
Lipodystrophy at injection sites : Yes, left abdomen  
Feet Examination - examined : no

A1c: Previous 6.8% Today 9.6%

#### ASSESSMENT AND PLAN:

Diagnosis - Type 1 diabetes mellitus - worsening control.

1. Insulin Dose Adjustments: Since his A1c has worsened and he reports normal BS, we will increase his lantus dose to 24 units. We discussed with him the importance of diligent diabetes care and his A1c goal. Mother was concerned that the worsening was due to the smart meter. We also discussed that he may be finishing his honeymoon period. We instructed them to fax in BS in 2 weeks so that further dose adjustments can be made. He had annual labs drawn today.

Lantus 24 units at bedtime  
Novolog: Insulin/Carb ratio 1:13 for breakfast, lunch, and dinner  
correction 1:100>150 at breakfast and lunch

2. Follow-up in 3 months.

Blood Sugar Monitoring Goals  
At least 4-6 times daily, including before hockey

HbA1C Goal  
<7.5%

Nutritional Goals  
Well-balanced, healthy meals

Behavioral / Educational Goals  
Record glucose on logs once weekly

Counseled parents/patient on:  
Importance of controlling BG  
ADA goal of A1c<7.5%  
Risks of NOT monitoring BG  
Importance of recording/reviewing BG  
Sx, tx, prevention and risk of hyperglycemia  
Sx, tx, prevention and risk of hypoglycemia  
Carb Counting  
Site rotation  
Parents involvement in diabetes care

## EXHIBIT 2

### Prevention Magazine Article

<http://www.prevention.com/health/healthy-living/electromagnetic-fields-and-your-health>

#### **Is Dirty Electricity Making You Sick?**

##### **Why Are Electromagnetic Fields Dangerous?**

Several developments have highlighted the growing hazards of EMF pollution—and the crucial need to address them.

**A report that cited more than 2,000 studies found that chronic exposure to even low-level radiation (like that from cell phones) can cause a variety of cancers, impair immunity, and contribute to Alzheimer's disease and dementia, heart disease, and many other ailments. One likely way: EMFs open the blood-brain barrier, causing blood vessels to leak fluid into the brain and damage neurons.**

**What's more, a less-well known kind of EMF, known as "dirty" or transient electricity, may play an even more damaging role. Transients are largely by-products of modern energy-efficient electronics and appliances—from computers, refrigerators, and plasma TVs to compact fluorescent lightbulbs and dimmer switches—which tamp down the electricity they use. This manipulation of current creates a wildly fluctuating and potentially dangerous electromagnetic field that essentially charges up the electrons in every cell of your body. Some research suggests that by overlapping the body's signaling mechanisms, transients may interfere with the secretion of insulin, drown out the call and response of the immune system, and cause other physical havoc.**

For more information on the dangers of electromagnetic fields, [read our full investigative report here](#). (below)

#### **Is Dirty Electricity Making You Sick?**

Too many electromagnetic fields surrounding us—from cell phones, wifi, and commonplace modern technology—may be seriously harming our health. Here's how to minimize your exposure.

Read more: <http://www.prevention.com/health/healthy-living/electromagnetic-fields-and-your-health#ixzz22iCT1oED>

#### **The California Cluster**

**IN 1990, the city of La Quinta, CA, proudly opened the doors of its sparkling new middle school. Gayle Cohen, then a sixth-grade teacher, recalls the sense of excitement everyone felt: "We had been**

in temporary facilities for 2 years, and the change was exhilarating." But the glow soon dimmed. One teacher developed vague symptoms-- weakness, dizziness--and didn't return after the Christmas break. A couple of years later, another developed cancer and died; the teacher who took over his classroom was later diagnosed with throat cancer. More instructors continued to fall ill, and then, in 2003, on her 50th birthday, Cohen received her own bad news: breast cancer. "That's when I sat down with another teacher, and we remarked on all the cancers we'd seen," she says. "We immediately thought of a dozen colleagues who had either gotten sick or passed away." By 2005, 16 staffers among the 137 who'd worked at the new school had been diagnosed with 18 cancers, a ratio nearly 3 times the expected number. Nor were the children spared: About a dozen cancers have been detected so far among former students. A couple of them have died.

Prior to undergoing her first chemotherapy treatment, Cohen approached the school principal, who eventually went to district officials for an investigation. A local newspaper article about the possible disease cluster caught the attention of Sam Milham, MD, a widely traveled epidemiologist who has investigated hundreds of environmental and occupational illnesses and published dozens of peer-reviewed papers on his findings. For the past 30 years, he has trained much of his focus on the potential hazards of electromagnetic fields (EMFs)--the radiation that surrounds all electrical appliances and devices, power lines, and home wiring and is emitted by communications devices, including cell phones and radio, TV, and WiFi transmitters. His work has led him, along with an increasingly alarmed army of international scientists, to a controversial conclusion: The "electrosmog" that first began developing with the rollout of the electrical grid a century ago and now envelops every inhabitant of Earth is responsible for many of the diseases that impair--or kill--us.

Milham was especially interested in measuring the ambient levels of a particular kind of EMF, a relatively new suspected carcinogen known as high-frequency voltage transients, or "dirty electricity." Transients are largely by-products of modern energy-efficient electronics and appliances--from computers, refrigerators, and plasma TVs to compact fluorescent lightbulbs and dimmer switches--which tamp down the electricity they use. This manipulation of current creates a wildly fluctuating and potentially dangerous electromagnetic field that not only radiates into the immediate environment but also can back up along home or office wiring all the way to the utility, infecting every energy customer in between. With Cohen's help, Milham entered the school after hours one day to take readings. Astonishingly, in some classrooms he found the surges of transient pollution exceeded his meter's ability to gauge them. His preliminary findings prompted the teachers to file a complaint with the Occupational Safety and Health Administration, which in turn ordered a full investigation by the California Department of Health Care Services.

The final analysis, reported by Milham and his colleague, L. Lloyd Morgan, in 2008 in the *American Journal of Industrial Medicine*: Cumulative exposure to transients in the school increased the likelihood a teacher would develop cancer by 64%. A single year of working in the building raised risk by 21%. The teachers' chances of developing melanoma, thyroid cancer, and uterine cancer

were particularly high, as great as 13 times the average. Although not included in the tabulations, the risks for young students were probably even greater.

"In the decades-long debate about whether EMFs are harmful," says Milham, "it looks like transients could be the smoking gun."

### **The Case against EMFs**

**Cancer and Electricity**--could a disease whose cause has long eluded scientists be linked to perhaps the greatest practical discovery of the modern era? For 50 years, researchers who have tried to tie one to the other have been routinely dismissed by a variety of skeptics, from congressional investigators to powerful interest groups--most prominently electric utilities, cell phone manufacturers, and WiFi providers, which have repeatedly cited their own data showing the linkage to be "weak and inconsistent." Recently, however, in addition to the stunning new investigations into dirty electricity (which we'll return to), several developments have highlighted the growing hazards of EMF pollution--and the crucial need to address them.

### **The Evidence showing harm is overwhelming.**

In 2007, the Bioinitiative Working Group, an international collaboration of prestigious scientists and public health policy experts from the United States, Sweden, Denmark, Austria, and China, released a 650-page report citing more than 2,000 studies (many very recent) that detail the toxic effects of EMFs from all sources. Chronic exposure to even low-level radiation (like that from cell phones), the scientists concluded, can cause a variety of cancers, impair immunity, and contribute to Alzheimer's disease and dementia, heart disease, and many other ailments. "We now have a critical mass of evidence, and it gets stronger every day," says David Carpenter, MD, director of the Institute for Health and the Environment at the University at Albany and coauthor of the public-health chapters of the Bioinitiative report.

### **Fears about the hazards of cell phones seem justified.**

"Every single study of brain tumors that looks at 10 or more years of use shows an increased risk of brain cancer," says Cindy Sage, MA, coeditor of the report. A recent study from Sweden is particularly frightening, suggesting that if you started using a cell phone as a teen, you have a 5 times greater risk of brain cancer than those who started as an adult. The risk rises even more for people who use the phone on only one side of the head. While defenders of cell phone safety claim no scientist can explain why EMFs may be harmful in humans, **a body of reliable and consistent animal research shows that electromagnetic fields, equal to those generated by mobile phones, open the blood-brain barrier, causing blood vessels to leak fluid into the brain and damage neurons.** Ironically, that research (by renowned Swedish neuro-oncologist Leif G. Salford, MD, PhD) began with the goal of finding a way to deliver chemotherapy to brain tumors.

### **Other countries are revising exposure standards.**

Members of the European Union, which has led the way on EMF investigations, are moving quickly to protect their citizens, particularly children and pregnant women. In the past 2 years alone, France, Germany, and England have dismantled wireless networks in schools and public libraries, and other countries are pressing to follow suit. Israel has banned the placement of cellular antennae on residences, and Russian officials have advised against cell phone use for children under 18.

**Electrical hypersensitivity (EHS) is becoming more widespread.**

Symptoms of EHS, a recently identified condition, include fatigue, facial irritation (resembling rosacea), tinnitus, dizziness, and digestive disturbances, which occur after exposure to visual display units, mobile phones, WiFi equipment, and commonplace appliances. Experts say up to 3% of all people are clinically hypersensitive, as many as one-third of us to a lesser degree.

**Electrical pollution is increasing dramatically.**

"For the first time in our evolutionary history, we have generated an entire secondary, virtual, densely complex environment--an electromagnetic soup--that essentially overlaps the human nervous system," says Michael Persinger, PhD, a neuroscientist at Laurentian University who has studied the effects of EMFs on cancer cells. And it appears that, more than a century after Thomas Edison switched on his first lightbulb, the health consequences of that continual overlap are just now beginning to be documented.

**A History of Harmful Effects**

Until Edison's harnessing of electricity, humans' only sources of EMF exposure were the earth's static magnetic field (which causes a compass needle to point north) and cosmic rays from the sun and outer space; over our long evolution, we've adapted to solar EMFs by developing protective pigment. "But we have no protection against other EMF frequencies," says Andrew Marino, PhD, JD, a pioneer in bioelectromagnetics who has done extensive EMF research and a professor in the department of orthopedic surgery at the Louisiana State Health Sciences Center. "How quickly can we adapt our biology to these new exposures? It's the most important environmental health question--and problem--of the 21st century."

Research into the hazards of EMFs has been extensive, controversial--and, at least at the outset, animated by political intrigue. A sampling:

- The Russians first noticed during World War II that radar operators (radar operates using radio frequency waves) often came down with symptoms we now attribute to electrical hypersensitivity syndrome. In the 1960s, during the height of the Cold War, they secretly bombarded the US embassy in Moscow with microwave radiation (a higher-frequency RF used to transmit wireless signals), sickening American employees. Radio wave sickness--also called microwave sickness-- is now a commonly accepted diagnosis.

- When television (also radio wave) was introduced in Australia in 1956, researchers there documented a rapid increase in cancers among people who lived near transmission towers.
- In the 1970s, Nancy Wertheimer, PhD, a Denver epidemiologist (since deceased), detected a spike in childhood leukemia (a rare disease) among kids who lived near electric power lines, prompting a rash of studies that arrived at similar conclusions.
- In the 1980s, investigators concluded that office workers with high exposure to EMFs from electronics had higher incidences of melanoma--a disease most often associated with sun exposure-- than outdoor workers.
- In 1998, researchers with the National Cancer Institute reported that childhood leukemia risks were "significantly elevated" in children whose mothers used electric blankets during pregnancy and in children who used hair dryers, video machines in arcades, and video games connected to TVs.
- Over the past few years, investigators have examined cancer clusters on Cape Cod, which has a huge US Air Force radar array called PAVE PAWS, and Nantucket, home to a powerful Loran- Cantenna. Counties in both areas have the highest incidences of all cancers in the entire state of Massachusetts.
- More recently, the new findings on transients--particularly those crawling along utility wiring--are causing some scientists to rethink that part of the EMF debate pertaining to the hazards of power lines. Could they have been focusing on the wrong part of the EMF spectrum?

### **Transients: The Post- Modern Carcinogen**

Some earlier, notable--albeit aborted--research suggests this may be the case. In 1988, Hydro-Quebec, a Canadian electric utility, contracted researchers from McGill University to **study the health effects of power line EMFs on its employees**. Gilles Theriault, MD, DrPH, who led the research and was chair of the department of occupational health at the university, decided to **expand his focus to include high-frequency transients and found, even after controlling for smoking, that workers exposed to them had up to a 15-fold risk of developing lung cancer**. After the results were published in the *American Journal of Epidemiology*, the utility decided to put an end to the study.

That research commenced at a time when energy-efficient devices--the major generators of transients--were beginning to saturate North American homes and clutter up power lines. [Smart meters generate transients 24/7 because the 240-volt current from the power line must be stepped down to a fluctuating (pulsing) 3-10 volt current to run the meter.] A telltale sign of an energy-efficient device is the ballast, or transformer, that you see near the end of a power cord on a laptop computer, printer, or cell phone charger (although not all devices have them). When plugged in, it's warm to the touch, an indication that it's tamping down current and throwing off transient pollution. Two of the worst creators of transient radiation: light dimmer switches and



compact fluorescent lightbulbs (CFLs). Transients are created when current is repeatedly interrupted. A CFL, for instance, saves energy by turning itself on and off repeatedly, as many as 100,000 times per second.

**So how does the human body respond to this pulsing radiation? "Think of a magnet," explains Dave Stetzer, an electrical engineer and power supply expert in Blair, WI. "Opposite charges attract, and like charges repel. When a transient is going positive, the negatively charged electrons in your body move toward that positive charge. When the transient flips to negative, the body's electrons are pushed back. Remember, these positive-negative shifts are occurring many thousands of times per second, so the electrons in your body are oscillating to that tune. Your body becomes charged up because you're basically coupled to the transient's electric field."**

**Keep in mind that all the cells in your body, whether islets in the pancreas awaiting a signal to manufacture insulin or white blood cells speeding to the site of an injury, use electricity--or "electron change"--to communicate with each other. By overlapping the body's signaling mechanisms, could transients interfere with the secretion of insulin, drown out the call-and-response of the immune system, and cause other physical havoc?**

Some preliminary research implies the answer is yes. Over the past 3 years, Magda Havas, PhD, a researcher in the department of environmental and resource studies at Trent University in Ontario, has published several studies that suggest exposure to transients may elevate blood sugar levels among people with diabetes and prediabetes and that people with multiple sclerosis improve their balance and have fewer tremors after just a few days in a transient-free environment. Her work also shows that after schools installed filters to clean up transients, two-thirds of teachers reported improvement in symptoms that had been plaguing them, including headache, dry eye, facial flushing, asthma, skin irritation, and depression.

Transients are particularly insidious because they accumulate and strengthen, their frequency reaching into the dangerous RF range. Because they travel along home and utility wiring, your neighbor's energy choices will affect the electrical pollution in your house. In other words, a CFL illuminating a porch down the block can send nasty transients into your bedroom.

Something else is sending transients into your home: the earth. From your high school science texts, you know that electricity must travel along a complete circuit, always returning to its source (the utility) along a neutral wire. In the early 1990s, says Stetzer, as transients began overloading utility wiring, public service commissions in many states told utilities to drive neutral rods into the ground on every existing pole and every new one they erected. "Today, more than 70% of all current going out on the wires returns to substations via the earth," says Stetzer--encountering along the way all sorts of subterranean conductors, such as water, sewer, and natural-gas pipes, that ferry even more electrical pollution into your home.

## **A Pragmatic Proposal**

**Of course, these** small studies--from Milham, Hydro-Quebec, and Havas-- hardly constitute a blanket indictment of transients. "We're still early in this part of the EMF story," says Carpenter. Does that mean as evidence of their harm accumulates, officials will raise a red flag? Not likely, if past EMF debates are any indication. Power companies have successfully beaten back attempts to modify exposure standards, and **the cell phone industry, which has funded at least 87% of the research on the subject**, has effectively resisted regulation. One good reason has had to do with latency--how long it takes to develop a particular cancer, often 25 years or more. Cell phones have been around only about that long.

But does that mean we avoid any discussion of their *possible* dangers? Again, if the past is a guide, the answer appears to be "probably." American scientists worried about the hazards of smoking, the DES (diethylstilbestrol) pill (given to pregnant women, it caused birth defects), asbestos, PCBs (polychlorinated biphenyls)--the list is lengthy--but officially warned about exposure only after they could say with absolute certainty that these things were harmful. As for protecting ourselves from toxic radiation, we have a lax--and laughable--history. In the 1920s, just a few years after medical imaging devices were invented, physicians were known to entertain their guests by x-raying them at garden parties. In the 1930s, scientists often kept radium in open trays on their desks. Shoe stores used x-ray machines in the 1940s to properly fit children's feet, and radioactive wristwatches with glowing hour hands were popular in the 1950s.

All of which means that, absent prudent safety standards from both public officials and manufacturers (adding a protective filter would add 5 cents to the cost of making a CFL and \$5 to the cost of a laptop), you'll have to protect yourself from EMFs. Here's a reasonable proposition: Practice what is known in Europe as the precautionary principle, which is pretty much what it sounds like. Don't expose yourself unnecessarily to EMF hazards. Don't buy a home next to a WiFi tower. Get a corded telephone instead of a cordless one. Don't let your teenager sleep with a cell phone under her pillow. Don't use your laptop computer in your lap. Treat your EMF-emitting devices with the same cautious respect you do other invaluable modern devices, like your car, which is also dangerous--and can kill. You don't drive in an unnecessarily risky fashion--at high speed or while talking on a cell phone (right?).

The sad truth is that until we have more epidemiologic evidence--whether from disease clusters like the ones at La Quinta and on Cape Cod or from long-term analyses of the health of the world's 4-billion-and-growing cell phone users--we won't know definitively whether electrical pollution is harming us. And even then, we are unlikely to know why or how. "In this country, our research dollars are spent on finding ways to treat disease, not on what causes it--which is to say, how we can prevent it," says Marino. "And that's a tragedy."

But that's also another story.

### **The Opposing View: "No need for regulation"**

In 1993, the National Institutes of health and Department of Energy began an extensive review of all studies on the possible health effects of electromagnetic fields. six years later they completed

their project, called the Electric and Magnetic Fields research and public Information Dissemination (EMF RAPID) program, and reported their findings to Congress: scientific evidence of human health risk from EMF exposure is "weak," they concluded.

While acknowledging a link between both childhood and adult leukemias and EMFs, the researchers' laboratory studies with cells and animals failed to identify a mechanism-- that is, how EMFs might cause cancer. (read the EMF RAPID report at [prevention.com/links](http://prevention.com/links))

To longtime EMF investigators such as David Carpenter, MD, the NIH dismissal of EMF hazards was patently absurd then and even more so now, given the spate of new findings. "We don't know the mechanism for most carcinogens," he says. "There's this idea that anything that causes cancer must directly damage DNA, which is nonsense because most carcinogens don't directly damage DNA, and physicists are adamant that the energy in everyday EMF exposure is so low, it couldn't possibly do anything to biological systems. It's like saying the Earth is flat because you can't see over the edge."

**In fact, biological impacts of EMFs--therapeutic ones--are well known.** Low-level frequencies are commonly used to promote healing of wounds and bone fractures, and experimental studies show positive effects of pulsed EMFs in treating pain and depression. Recently, Michael Persinger, PhD, a cognitive neuroscientist at Laurentian University, found that pulsed magnetic fields also halted the growth of melanoma cells in mice.

In a neat twist of logic, many scientists believe that the more we document beneficial effects of EMFs, the better we'll understand their hazards. "If EMF at low intensities can heal," says environmental consultant Cindy sage, "then when we are constantly and randomly exposed to it from multiple sources, it may also be harmful, like any medicine used indiscriminately."

### **What was wrong with the La Quinta School?**

According to epidemiologist Sam Milham, MD, the middle school was rife with the usual suspects-- fluorescent lighting, electronic devices--whose toxic effects were exacerbated by an electrical supply overloaded with high-voltage transients.

Substandard wiring in the new school also undoubtedly played a role; officials have since added protective shielding to the electrical room. Milham also measured transient pollution along the transmission lines that fed power to the school. "I found it all the way from the substation to the school--more than a mile," Milham says. "There are three other buildings along the route that also serve children. I've reported it to the FCC and the utility, but they ignore the problem."

### **How electrical pollution harms**

Here, a partial spectrum of the electromagnetic fields that surround us, from strong (waves of extremely high frequency and short length) to weak (waves of extremely low frequency and long length). In each category, you'll find sources that generate the EMF, and associated health risks from overexposure.

<b>X-Ray</b> [medical imaging devices] Used to diagnose illness	<b>RISK</b> Damages tissue and organs by breaking bonds
<b>VISIBLE LIGHT</b> [SUN] The only visible EMF	<b>RISK</b> Ultraviolet light can burn skin and cause cancer
<b>MICROWAVE</b> (a higher frequency RF) [CELL AND CORDLESS PHONES AND TOWERS] Can heat tissues and penetrate blood-brain barrier	<b>RISK</b> Increased risk of brain cancer, dementia, and heart disease
<b>RADIO(RF)</b> [RADIO AND TELEVISION SIGNALS] Can disrupt body's cellular interactions	<b>RISK</b> "Radio sickness" and electrical hypersensitivity syndrome
<b>EXTREMELY LOW FREQUENCY (ELF)</b> [POWER LINES] Can cause weak electric currents to flow through the body	<b>RISK</b> Exposure is associated with childhood leukemia

Read more: <http://www.prevention.com/health/healthy-living/electromagnetic-fields-and-your-health#ixzz22iUSKV5z>

**PRE-FILED DIRECT TESTIMONY  
OF [REDACTED]  
MPUC Docket No. 2011-00262**

1    **Q.    Please state your name, address and contact information.**

2    A.    - [REDACTED]

3

4    **Q.    Was a smart meter installed at your residence?**

5    A.    Yes.

6    **Q.    Did you offer to provide testimony in another proceeding about your**  
7        **experience with smart meters?**

8    A.    Yes. I have had serious health problems related to smart meters and I offered  
9        testimony in a Michigan Public Service Commission hearing (Case No U-17053)  
10       reviewing a proposed opt-out program for Detroit Edison Company's Advanced  
11       Metering Infrastructure. Unfortunately, the Commission would not accept any  
12       testimony about health and safety issues.

13   **Q.    Is the attached document marked as Exhibit A a true and accurate copy of**  
14       **the testimony that you offered to provide to the Michigan Public Service**  
15       **Commission?**

16   A.    Yes it is.

17   **Q.    Are the statements that you made in the attached Exhibit A still true and**  
18       **accurate?**

19   A.    Yes.

1 Q. Do you wish to add anything here not included in your statement in Exhibit

2 A?

3 A. I had my home tested for EMF levels with a TriField meter, model 100XE. (I  
4 don't remember the exact date).

5 My home tested high EMF in many locations. Therefore, I hired an  
6 electrician who is knowledgeable about RF and EMF to make some changes in my  
7 electrical wiring in order to, hopefully, lessen the EMF levels.

8 Of course, I don't know what the EMF levels were prior to the meter  
9 change, but I had never experienced symptoms before, so something major  
10 changed when the meter was installed.

11 My home was built in 1962. I had my home inspected before purchasing it  
12 in 1987, and I have always hired reputable people for repairs or additions. It is a  
13 nice home, but it was not built with modern technology in mind. If the electrician  
14 found instances where EMF levels were raised in my home, I suspect there are  
15 many other homes where dirty electricity from these meters has elevated EMF  
16 levels.

17 The electrician spent a little over 2 days upgrading the wiring in my home.  
18 He said that more can be done, if needed: there are additional interventions that he  
19 could do which would involve working with a plumber. He suggested starting  
20 with the wiring. So, on Dec. 21-23, he made changes in the electrical wiring in my  
21 home.

22 I was away from my home immediately following the work by the  
23 electrician. I left for a trip on Dec. 23, 2012 and I just returned on Jan. 4, 2013.



1 ALL of my symptoms completely went away on my trip, in fact, within the first  
2 week of my trip.

3 On January 14, 2013, he did additional testing. Some of the high EMF  
4 readings had gone down. There are still some areas that test high, however.

5 It is still too soon to know how much, if at all, the recent changes in wiring  
6 have helped in alleviating my symptoms. What I noticed immediately upon  
7 returning home after being gone for three weeks, was that the ringing in my ears,  
8 though still an issue, was not as constant. So far, this intervention, like all the  
9 others, has helped at least to some degree. As I said, it is still too soon to know.

10 It remains to be seen if my symptoms resurface after I have been home for a  
11 longer period of time.

12 I am planning to follow through with additional interventions to, hopefully,  
13 bring my home back to the level of comfort that I enjoyed prior to the meter  
14 installations.

15 I am grateful that I have had the resources to be able to spend a great deal  
16 of time away from my home since the meters were installed; and the resources to  
17 remediate at least some of the adverse effects of the smart meter installations. I'm  
18 sure there are others who are not as fortunate, who are forced to just live with the  
19 problem.

20 **Q. Do you want to submit the statements in Exhibit A to the Maine Public Utility**  
21 **Commission for consideration in its pending proceeding to investigate the**  
22 **safety of smart meters?**

1 A. Yes. I submit the attached testimony in support of complainants Ed Friedman, et  
2 al in their case before the Maine PUC as evidence that smart meters are not safe.



STATE OF MICHIGAN  
WASHTENAW, ss

January 22, 2013

Personally appeared the above-named [REDACTED] and stated under oath that the foregoing Affidavit made by her is true and based upon her own personal knowledge, information or belief, and so far as upon information and belief, she believes the information to be true. Before me,

Andrea Taddie  
Notary Public

Andrea Taddie  
Name Typed or Printed

My Commission Expires: \_\_\_\_\_

**ANDREA TADDIE**  
Notary Public, Washtenaw County, MI  
My Commission Expires Dec. 9, 2018

3  
4



STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application and request )  
of the DETROIT EDISON COMPANY seeking )  
approval and authority to implement its )  
proposed Advanced Metering Infrastructure )  
opt out program. )

Case No U-17053

QUALIFICATIONS AND DIRECT TESTIMONY OF

QUALIFICATIONS OF [REDACTED]

**Q. Do you swear that the testimony you are about to give is the truth, the whole truth, and nothing but the truth?**

A. I do.

**Q. Please state your name, address and contact information.**

[REDACTED]

**Q. On whose behalf are you testifying?**

A. That of Intervenors Linda Kurtz and Cynthia Edwards.

**Q. What are your qualifications to testify?**

A. I take my electric service from Detroit Edison. My health has been extremely affected by the smart meter that was first on my home and the nontransmitting Itron digital meter that is now on my home.

**Q. What is the purpose of your testimony?**

A. To provide information that establishes that there is a need for a no-fee opt-out and the need for an analog meter option. To provide information that may help the Commission in determining that smart and digital meters create certain kinds of economic, medical, social, or other harm or hardship, as outlined in Intervenor Linda Kurtz's Petition for Intervention, to some or all persons such that Detroit Edison and the Commission must not require those who are or who are likely to be so harmed to have a smart or digital meter placed on their home or place of business or to be otherwise deprived of rights and liberties, as outlined in Intervenor Kurtz's Petition for Intervention, by the deployment of the advanced metering infrastructure, smart meters, or digital meters, and, in the alternative, that such persons must be able to avoid such harm to their person and property without being charged a fee.

**Q. How long have you lived at your current residence, and do you rent or own?**

A. 25 years

**Are you retired?**

A. I am a retired.

**Q. Before a smart meter was installed on your home, did you have problems with wireless technology?**

A. No. Prior to the installation of my smart meter, I did not have any problems with wireless technology. I did not experience symptoms when using a cell phone; I did not experience symptoms when I used wireless internet or when I entered a facility that offered wireless internet; and I did not experience symptoms from the wireless technology that was already in my home, which, at the time of the smart meter installation, included a wireless water meter, and a cordless phone.

**Q. Prior to the installation of a smart meter on your home, were you affected by other electrical devices?**

A. No, not that I was aware of.

**Q. When was a smart meter installed on your home?**

A. A wireless smart meter was installed on my home on the morning of Saturday, March 10, 2012, while I was not home.

**Q. Did you know the meter was going to be installed?**

A. Yes. A few weeks before the installation, I had received a notice from DTE that a new, upgraded, wireless meter would be installed on my home. When I got the notice, I called DTE indicating that I would rather not have the wireless meter. I was told that I had no choice. Although I would have preferred not to get it, I was not anticipating a problem with it either. It was a "preference" not to have it, as opposed to an aversion.

**Q. You say you preferred not to get one, then tell us why you didn't want it.**

1 A. As I said, it was just a preference. When I got my first cell phone, I read the manual, and it  
2 indicated that, for safety reasons, I should hold the cell phone about an inch from my head when  
3 using it. I believed the manufacturer's warnings which indicated there may be risks involved with  
4 this technology. I have used, and still use, lots of wireless devices. It's not that I worry about their  
5 effects and avoid them; it is more that I weigh the benefits, and I purchase the ones which I see as  
6 highly beneficial, I choose not to use the ones that are not. The meter did not fall into the "highly  
7 beneficial" category. I am concerned about the environment and I am already conscientious  
8 regarding my energy usage at home. I keep my thermostat lower and wear warm clothing in the  
9 winter, I turn down my heat at night and when I am gone, I don't often use air conditioning during  
10 the summer, I have replaced older appliances for newer, more efficient ones, My TV is very small  
11 and I rarely watch it, I turn off the lights I don't need. In weighing the proposed benefits a smart  
12 meter, it didn't seem like something I needed. However, when I called DTE, I was told I didn't have a  
13 choice. I didn't get upset or argue. I just accepted it. Had I had any idea what an impact it would  
14 have on my life, though, I would have protested immediately  
15

16 **Q. What happened when you returned home after the meter had been installed?**

17 A. I returned home a little after 1 p.m.. There was a note on my door indicating the new meter  
18 had been installed. I didn't think much about it. Shortly after arriving at home, I went into my  
19 kitchen to prepare lunch. There are no words that can adequately describe what happened next.  
20 Here's my best effort:

21 As I stood at my kitchen sink (a stainless steel sink, opposite my refrigerator), I felt a very  
22 uncomfortable vibration, like a low-level electric current, going through my body; there was a  
23 buzzing sound in my head; and I experienced a jittery feeling in my body.  
24

25 When I stepped away from the sink, the feeling lessened considerably, but was still noticeable,  
26 especially whenever I was in close proximity to the back wall of my home.  
27 My first thought was, "That must be the new meter. This will take some getting used to." At that  
28 point, I wasn't upset and I didn't panic. I honestly thought that my body would just need some time  
29 to adjust to it, and then everything would be okay.  
30

31 Later, a friend who is a physics professor explained that my extreme reaction may have been  
32 because radio waves were bouncing off the metal surfaces of the sink and/or the refrigerator. I  
33 don't know what caused it; I just know it was weird and extremely uncomfortable.  
34

35 **Q. So you weren't worried about the new meter?**

36 A. No. not yet. I wasn't worried prior to the installation, and when I first had the reaction, I  
37 just thought it was something my body would adjust to. Looking back, of course, I think "How could  
38 I have been so stupid? Why didn't I leave my house immediately?" At the time, though, as strong as  
39 my initial reaction was, it didn't occur to me that exposure to a meter could cause problems, or  
40 have prolonged consequences. I assumed I'd get used to it and the weird feeling and buzzing in my

1 head would go away. It was seeing my blood pressure suddenly shoot up, that suggested to me that  
2 the meter was causing more than a "weird feeling." That's what triggered my concern.

3  
4 **Q. Had you heard of smart meters prior to having one installed on your home?**

5 A. Yes and no. I was not aware of any controversy. I had seen an article that said energy  
6 companies were installing new meters; that in some locations, people were being forced to accept  
7 the meters whether they wanted them or not; and that it wasn't right. I tend to be more accepting  
8 of things, and because I considered the views of this person to be a little extreme, I hadn't taken the  
9 article seriously. I hadn't given it much thought, that is, until my personal experience with smart  
10 meters.

11 **Q. What happened next, the day the meter was installed?**

12 A. As the day progressed, I developed a dull headache and I had a hard time focusing and  
13 concentrating. I also became hoarse. At first, I didn't make a connection between these symptoms  
14 and the meter. I did later, though, when these symptoms persisted, and when they developed at  
15 home, but went away after being away from home for awhile.

16  
17 That first day, in addition to the headache and lack of focus, by early evening, my blood pressure  
18 had gone up significantly. High blood pressure had not been an issue for me. I had had a blood  
19 pressure monitor, and for several years I had checked it occasionally. There had never been cause  
20 for concern.

21 **Q. Why had you made the decision several years ago to check your blood pressure from time  
22 to time?**

23 A. I care about my health. Checking it occasionally was a precautionary measure.

24  
25 **Why are you so sure that the smart meter influenced your blood pressure readings?**

26 A. Quite by coincidence, I had taken lots of readings right before smart meter installation. I do  
27 Bikram Yoga almost every day. It is a 90 minute, rigorous series of 26 postures, that is done in a  
28 room that is 105 degrees. It is a good workout. A fellow classmate had mentioned health benefits  
29 she attributed to her yoga practice, lower blood pressure being one of them. As I said, I didn't have  
30 blood pressure issues, but I wondered what effect, if any, my yoga practice had on mine. I decided  
31 to do an experiment: My plan was to take my blood pressure three times a day: before class, after  
32 class, and a reading later in the day. It was because of this experiment that I noticed the immediate  
33 spike in my blood pressure.

34 **Q. What were your blood pressure readings prior to the smart meter installation?**

35 A. Exhibit A is my record of blood pressure readings from March 1 through March 12. Prior to  
36 March 10 (installation day), the range in readings was 108/61 to 133/75. The average reading was  
37 119/64.

38 **Q: What were your readings the day of the installation?**

39 A. Before yoga, my blood pressure was 118/72. After yoga, it was 125/72.

1 By 5:00 p.m. it was 150/90. Later, it was 157/86. I remember that right before going to bed that  
2 night it was 165/90, but I did not record that reading.

3  
4 It was the rise in my blood pressure that triggered my concern. It made me aware that my body was  
5 being affected on more levels than I had realized. and that the weird feeling I was experiencing was  
6 not something to take lightly

7  
8 **Q. What did you do then?**

9 A. That night, rather than sleep in my own bed, I slept in the upstairs bedroom furthest away  
10 from my smart meter. The next day, Sunday, March 11, I called a friend and I arranged to stay at  
11 her house. I slept at her house from Sunday until I left for a three-week trip to Brazil on March 18.

12  
13 **Q. The second night, you slept at a friend's house. Did you notice a difference when you**  
14 **slept at your friend's house?**

15 A. I didn't experience the buzzing sound in my head at her house, and the next morning my  
16 blood pressure was down again. I slept better than I had at my own house, and I didn't wake up  
17 with a headache. The weird, jittery feeling I had when at home lessened, but was still noticeable.

18 **Q. Did you return to your home?**

19  
20 A. Yes. I could not totally avoid being in my own home that week because, in addition to  
21 packing for my trip, I had many things I had to take care of before leaving. However, I stayed away  
22 from home as much as I could.

23  
24 **What happened when you were in your own home that week?**

25 The weird, jittery feeling and difficulty focusing persisted; I had headaches. Also, my eyes hurt, I  
26 became hoarse, and I developed a dry cough. For the first time in my life, I started on blood  
27 pressure medicine.

28  
29 **Q. Did you call DTE?**

30 A. Yes. Monday, March 12, the first business day after my meter was installed, I called DTE  
31 from home. I was told there was no way to opt out of a smart meter. I explained that the meter was  
32 making me sick and that I couldn't stay in my house. I said I wanted to be transferred to someone  
33 who could help me. The person I talked to said she could not transfer me to a supervisor, but that  
34 she would arrange for someone to call me back. I indicated again that it was very uncomfortable for  
35 me to be in my house, but that I would wait there for the call. I said it was an emergency, and that I  
36 needed to talk to someone as soon as possible. No one called back. I called again that day or the  
37 next, and got no response.

38  
39 How were you feeling inside your home waiting for the call? The jittery feeling, the difficulty  
40 concentrating, and the buzzing in my head were worse. I was also upset that I was getting such a

1 run-around from DTE. I knew I was leaving the country in a few days. I had hoped that I'd be able  
2 to come back to a home with a normal, comfortable environment.

3  
4 **Q. Did DTE get back to you?**

5 A. Not right away. When I had not heard back by Wednesday, March 14, two days after being  
6 told someone would call me back, I sent an email to DTE via their online complaint site.  
7 I was eventually told I was being referred to Elaine Curtis. I talked to Elaine on Friday, March 16.

8  
9 **Q. What did she tell you?**

10 She said DTE would remove my meter if I could provide a letter from my doctor indicating my  
11 smart meter was making me ill.

12  
13 **Q. Had you seen a doctor?**

14 A. Yes. I had seen my doctor earlier in the week, on Wednesday, March 14. At that time, of  
15 course, I had not yet talked with Elaine Curtis, so I did not know I would need a letter. Since it was  
16 Friday by the time learned about the need for a doctor's letter; and I was scheduled to leave for  
17 Brazil early on Sunday, I was unable to talk to her before I left. I called her office on Friday  
18 afternoon, and when I didn't reach her, I left a message.

19  
20 I had contacted my doctor immediately; I had been concerned about all of my symptoms, but  
21 especially the high blood pressure readings. I wanted to get in to see someone before leaving on my  
22 trip. My appointment was on Wednesday, March 14. Following the appointment, I started taking a  
23 beta blocker. She said it should lower my blood pressure without making it go too low when I was  
24 away from smart meters. She was right, it did. It also helped relieve the persistent jittery feeling I  
25 was having. I continued to sleep at my friend's and spend as little time at home as I could.

26  
27 **You were gone for three weeks. How did you feel in Brazil?**

28 A. I was fine in Brazil. I felt great and I slept very well. The headaches, the buzzing in my head,  
29 and the weird jittery feeling all went away and did not come back until I returned home.

30  
31 **Did your doctor write the letter?**

32 A. Yes. In spite of the fact that communicating from Brazil proved to be a challenge because  
33 phone lines and access to email were not always available or consistently working, my doctor did  
34 send the letter to DTE. Six days prior to my returning home, I received an email from Elaine Curtis  
35 indicating that she had received the letter from my doctor, and that the meter would be removed.  
36 Dr. Kyle Morgan faxed her letter directly to DTE; DTE has the letter. I do not have a copy.

37  
38  
39 **Q. Did DTE follow your doctor's instructions?**

1 Not exactly. In addition to indicating the meter was making me ill, Dr. Morgan had specified an  
2 analog meter. DTE replaced my smart meter with a different digital meter, not an analog meter.

3  
4 Elaine Curtis said that DTE no longer had a distributor for analog meters. From Brazil, I sent an  
5 email to DTE via the DTE complaint link.

6  
7 The many typographical errors exist because, after losing power in the middle of writing my letter  
8 several times (and therefore, losing what I had written), I finally sent this one, errors and all.

9  
10 DTE ignored both my request for an analog meter and my doctor's letter specifying the need for an  
11 analog meter. If DTE had wanted to install an analog meter, it would have been very easy to do so.  
12 Hundreds, even thousands of used analog meters, in good working condition, were available.

13  
14 **Q. Was the smart meter removed?**

15 A. Yes, but it took awhile. Since I had received the email from Elaine Curtis on April 4th  
16 indicating that my meter would be replaced, and since I wasn't coming home until April 10th, I had  
17 hoped that my smart meter would be gone when I got home. As soon as I arrived home, I walked to  
18 the back of my house and checked. It hadn't been changed. I went back to stay at my friend's house,  
19 and I called Elaine Curtis immediately. I don't remember if I actually talked to her that day, or if I  
20 left a message and she called me back. When we talked, she thought that my smart meter had  
21 already been removed. She said she would check into it and get back to me. She did. When she  
22 called me back, she assured me it would be removed within a few days. It was. I don't remember  
23 what day it actually came off.

24  
25 **Q. Why did you request an analog meter?**

26 A. I had not had any problems with the old analog meters; and, although I didn't understand  
27 the concept, I had heard the term "dirty electricity" associated with digital technology. At that  
28 point, I wanted my old, familiar, healthful home back.

29  
30 **Q. Did replacing the smart meter with a digital meter solve the health problems caused by  
31 the smart meter?**

32 A. No. Although there was an improvement, the new digital meter did not solve the problem.  
33 My symptoms were not as severe as they had been with the smart meter, but the weird jittery  
34 feeling, the headaches, the buzzing sound in my head, the cough, memory problems, and the  
35 difficulty focusing—all came back, just to a lesser degree.

36  
37 **Q. What did you do?**

38 A. I contacted Elaine Curtis again. She said she didn't think the new meter could cause  
39 problems, but that she would look into it. When she got back to me, she said that the new digital  
40 could not be the problem because it did not send a signal.



1  
2 In the meantime, I had talked to my friend who teaches physics. She said that because radio  
3 frequencies travel long distances, my current problems might be caused by the RF from my  
4 neighbors' meters. She recommended putting up heavy duty tinfoil, shiny side toward the meters,  
5 where I suspected the RF might be entering my home. The tin foil would help shield my home,  
6 since radio waves are reflected by metal and shiny surfaces. She also explained that there are  
7 materials which diffuse radio frequencies.

8  
9 Someone else said that the problem could be that the new digital meter was dumping dirty  
10 electricity into my home, and that could be causing the problem.

11  
12 **Q.What did you do then?**

13 A. I did what I could to solve the problem:

14 My first intervention was to line my garage and cover an outside wall with heavy duty tin foil to  
15 shield my house from my neighbor's smart meter that was closest to my house, and where I felt it  
16 the most. That helped....a little. The buzzing in my head was definitely still there, but not quite as  
17 intense. The other symptoms remained.

18  
19 Next, I lined the inside wall with tin foil that shares the wall with my meter, On top of that, I put 3  
20 layers of absorbing material. After this intervention (and every other intervention), I waited awhile  
21 to see what, if any, effect it had on how I felt or on my symptoms.

22  
23 **Q.Did it help?**

24 A. Yes. Although better, it was still difficult to be in my home.

25 Now that I was spending more time at home, other symptoms surfaced. I wasn't sleeping through  
26 the night: I'd wake up after three, four or five hours and not be able to go back to sleep. I'd feel  
27 tense, jittery. I became hoarse, and I developed a cough. After being home for about three weeks, I  
28 began to notice breathing problems: I would get out of breath just by going upstairs, and I had  
29 difficulty breathing in my Bikram Yoga Class when doing postures that I had done with ease prior to  
30 the smart meter installations. Also because of my yoga practice, I noticed a slight weakness on my  
31 left side, that had not been there earlier. I was not able to do some of the strength building postures  
32 I had done earlier.

33  
34 The buzzing sound in my head would seem louder late at night and early in the morning, and I  
35 would always wake up with a headache and a buzzing sound in my head.

36  
37  
38 **Q. Have the interventions you've done helped?**

39 A. There is no question that each intervention has helped. The problem is that my home has  
40 never gone back to being what it was before: I still can't tolerate being in my home for more than a

1 week or two without experiencing very worrisome symptoms. At this point, I still have concerns  
2 regarding smart meter effects on my blood pressure; and I have even bigger concerns about my  
3 breathing and my lungs. If I am home for more than a week, I get out of breath when I go up stairs,  
4 or when it is humid outside, and in I am no longer able to do some of the Bikram Yoga breathing  
5 exercises and postures that I formerly did with ease. So far, all of these symptoms improve or go  
6 away entirely when I leave my home for an extended period of time. I can't keep searching for  
7 people and places to visit, and as more smart meters are installed, there will be fewer places I can  
8 go for relief.

9  
10 **Q.What else have you done to your home?**

11  
12 A. Since my first attempt at using tin foil as a shield had helped . . . a little. . . I put up more.  
13 I put tin foil on some inside walls. I also put tin foil in my bathroom, and on the back wall of the  
14 bedroom that shares a wall with the meter.

15  
16 I ordered material which is designed to absorb radio frequencies from [lessemf.com/](http://lessemf.com/). I put three  
17 layers of that material over the tin foil lining the back wall of the bedroom closest to my digital  
18 meter. I also lined one of the walls in my bedroom with this material.  
19 The RF absorbing material is black; not exactly my color I'd choose for my bedrooms.

20  
21 Because I was still experiencing symptoms, a few months ago I ordered a Graham - Stetzer meter  
22 and filters. I had read that the EMF levels can be measured and reduced by adding the filters.  
23 Again, I did notice a difference with the filters in place, but not enough of a difference to keep me  
24 symptom free.

25  
26 Last month, I covered the back wall of my home with tin foil. It looks awful, but it made a  
27 difference. Again, it helped, but it has not totally taken care of the problem. With each intervention,  
28 I have felt a little calmer and the symptoms seem a little less intense, but none of the interventions  
29 has totally solved my problems. As I mentioned, I am especially concerned about the breathing  
30 difficulties I experience after being in my home for awhile. My blood pressure remains a concern as  
31 well, although I have been getting normal readings without medication since my last intervention of  
32 putting tin foil on the entire back side of my home.

33  
34 I tried to spend as much time out of my home as possible. I left whenever I could. I went on trips  
35 for one to three weeks. Some were planned; others were trips I took just to get away from my  
36 house. Some symptoms, such as coughing, would go away as soon as I left my home. Others would  
37 go away after being out of my home for a period of time. The amount of time required for it to go  
38 away, depended on the symptom.

1 q. **How long can you stay in your house before noticing symptoms?**

2 A. The length of time before I experience symptoms depends on the symptom: If I return  
3 home after being away for a week, I feel jittery and get a buzzing sound in my head immediately  
4 upon entering my home. Within a few hours of being home, my eyes may hurt and become dry,  
5 and I will become hoarse and develop a cough. Things like breathing problems and weakness on  
6 my left side surface after being home for a week or more.

7  
8 **Q. How are things now?**

9  
10 A. I'm still spending as much time as possible away from home. From March 10, 2012, when  
11 smart meters were installed in my neighborhood, to the present, the longest stretch of time I will  
12 have been at home at one time is 30 days. Usually I am home only a few weeks before leaving  
13 again. When I leave, I try to be away for one to three weeks.

14  
15 So far, when I have spent time away from my home, my symptoms have all lessened or completely  
16 gone away. When I return, they return.

17 Although being in my home is more tolerable than it was, even with all that I had done, my health  
18 while in my home is still not back to what it had been prior to the smart meter installations

19  
20 **Q. Did these interventions help? Is the digital meter no longer a problem?**

21 A. The interventions have helped, but all the problems remain. Whenever I return home, I  
22 immediately experience a buzzing sound in my head, I become hoarse, and I get a dry cough. My  
23 reactions are systemic: If I am at home for an extended period of time (a few weeks), additional  
24 symptoms surface:

- 25 • weakness on my left side,
- 26 • joint pain,
- 27 • chest pain,
- 28 • difficulty focusing,
- 29 • hot flashes,
- 30 • breathing problems,
- 31 • shortness of breath,
- 32 • skin things (a rash above my right eye; rough hardened skin on my knuckles)
- 33 my eyes hurt and become dry,
- 34 all my teeth on my upper left jaw ache.

35  
36 **Q. Did you make any more attempts at mitigation?**

37 A. I had not shielded the back of my house, both because I didn't think I could get tinfoil to  
38 stay up, and because I knew it would look terrible. Finally, though, in October, out of desperation to  
39 make my home more livable, I lined the entire back of my house with tinfoil. It looks awful. Again,  
40 it has not totally taken care of the problem and it is only a temporary measure, but it helped. I still

1 haven't spent more than a few weeks in my home since this latest addition of tinfoil, but so far my  
2 sleep is more normal, the jittery feeling is not as intense, I don't feel as spacey. I am still getting  
3 hoarse, but less often, and my eyes hurt less. The weird, unsettled sensation in my body and the  
4 uncomfortable buzzing sound in my head persist.

5  
6 With each intervention I have seen an improvement in my symptoms, but my house is in no way  
7 back to what it was before smart meters were installed in my neighborhood or the digital meter  
8 was installed on my home.. In addition, the tinfoil, besides being ugly, is a temporary solution that  
9 won't hold up over time.

10 **Q. How do you know that it is the digital meter that is causing these health effects?**

11 Although I know it seems unbelievable that a meter could trigger all these health effects, the meter  
12 was the only thing that has changed in my home environment. Furthermore, at least so far, all these  
13 problems go away when I leave my home: some go away immediately upon leaving; others go away  
14 in time. The symptoms return when I return.

15 **Q. So when you go to someone else's house that has a smart meter, do you have problems?**

16 A. Yes, to varying degrees. I always experience the buzzing sound and a jittery feeling. I may  
17 or may not experience other symptoms.

18 **Q. When you go into public buildings that have smart meters, do you have problems?**

19 A. Fortunately, most of the places I frequent do not have smart meters yet, so I can't answer  
20 this adequately. However, the spiritual center I attend has a smart meter and it is very  
21 uncomfortable to go there, so I have not been going.

22  
23 **Q. Have you been in any home besides your own that has a digital meter?**

24 A. Yes. I have a friend who lives on Lake Tahoe. She remodeled her home several years ago,  
25 and has a digital meter. It is not a smart meter. I really don't know if it is the same as my meter.  
26 Her home is very deep, and the meter is way at the back. I couldn't sleep when I stayed in a back  
27 bedroom. I was able to sleep when I slept on her sofa, in the front of the house. The weather was  
28 great when I was there, and we spent most of our time outside hiking or by the water. I didn't have  
29 as much trouble there as I do at my own home. Her meter is older; I don't know if it is like mine.

30  
31 **Q. In your experience, will the nontransmitting digital meter (the kind now on your home  
32 and the kind DTE is proposing as the alternative to the smart meter) solve the health  
33 problems you experience with smart meters?**

34 A. No.

35  
36 **Are the nontransmitting digital meters an acceptable alternative to the smart meter?**

37 A. No

38  
39 **Please list all the health effects you experience from smart and nontransmitting digital  
40 meters, whether on your own home or elsewhere.**

1 buzzing in my head  
2 Elevated blood pressure  
3 Muscle weakness, especially on my left side  
4 headaches  
5 cramps in legs and feet, extremely cold feet  
6 eyes hurt, blurry vision  
7 breathing problems, shortness of breath  
8 joint pain, arthritis like symptoms  
9 chest pain  
10 concentration and memory problems  
11 All of my teeth on one side aching  
12

13 **Q. How do you know that it was the smart meter that first caused these health effects and not something else?**

14 A. The symptoms surface when I spend time at home. They go away when I leave. They  
15 surface when I am home again. I don't know if the symptoms are caused by my digital meter or my  
16 neighbors' smart meters, but the installation of smart meters in my neighborhood is the only thing  
17 that has changed in my environment.  
18  
19

20 **Q. Please list all the health effects you currently experience from the digital meter on your home.**

21 A. Without the remediation or if I am around other people's smart meters, I sometimes  
22 experience all of them, especially buzzing in my head.  
23 With the mitigation, I still experience buzzing in my ears and a I am not as calm, I'm more agitated.  
24 To date, I haven't stayed at home long enough to know if the other symptoms will surface again.  
25  
26

27 **Q. Please list all the health effects you in the past experienced from the digital meter on your home but do not currently experience.**

28 A. Since putting tin foil on the back of my home, my blood pressure has been normal without  
29 medication as long as I avoid smart meters.  
30

31 **Q. Has anything else changed that would account for the subsiding of these effects?**

32 A. No  
33

34 **Q. Did you experience any of the health problems you have enumerated prior to the installation of smart meters?**

35 A. In 2007 I became ill after being exposed to a very toxic paint. The symptoms I did not  
36 experience were the buzzing in my head and the elevated blood pressure. I did experience the other  
37 symptoms. I recovered from that injury, and, until the smart meter was installed, I had not had  
38 experienced any of these symptoms since my recovery in 2008.  
39

40 A.

1 **Q. Did you have health problems prior to the installation of smart meters? If so, what were**  
2 **they and when did they begin?**

3 A. Prior to the installation of my smart meter, I was healthy, I exercised regularly, I ate a good  
4 diet, and I was on no medication..  
5

6 **Q. Did you do anything else to deal with this problem?**

7 A. Like I said, I put up shielding materials and I started spending as much time as possible  
8 away from home. I took several trips. Although some had been planned, I have taken others for the  
9 sole purpose of getting away from my house. From March 10, 2012, when my smart meter was  
10 installed, to present, the longest stretch of time I will have been home at one stretch is 30 days.  
11 When I have spent time away from home, I have generally left for one to three weeks at a time.  
12 Each time I left, my symptoms went away within a day or two of being out of my house. I am still  
13 spending as much time away from my house as possible.  
14

15 At this point, I have spent about \$2000 in materials and devices to tolerate living in my home, and I  
16 still have only a temporary fix that doesn't completely solve the problem. And, DTE is proposing  
17 additional charges to opt out.

18 DTE could probably use my home as an example of a smart meter success story: Their records  
19 should show that my energy usage has gone down since smart meters were installed in my  
20 neighborhood. It's a good example of how misleading it can be to just look at one source of data.  
21 My "real" energy usage is up—considerably. I consumed a lot more energy when you consider:

- 22 • transportation to doctors,
- 23 • products purchased to remediate my home
- 24 • medications I will need that I would otherwise not have needed
- 25 • driving and flying to destinations in order to stay away from home
- 26 • utilities consumed at visiting destinations

27 These are not just monetary expenses for me. They involve energy expenditures that far outweigh  
28 any energy savings DTE might claim.

29 My home no longer feels like "home." The number of places I can go and remain symptom-free is  
30 dwindling as Ann Arbor, the rest of Michigan, and the rest of the country is being installed. I would  
31 sell my house and move, but, at this point, I don't know where I could go.

32 **Q. Please list all of the health problems you currently experience from the digital meter on**  
33 **your home?**

34 A. Since my last mitigation, my most common symptoms are buzzing in my head, jitteriness,  
35 and breathing problems. The breathing problems are the ones that concern me the most.

36 **Q. Do you experience problems when you enter homes or other buildings with smart**  
37 **meters?**

38 Yes. I can tell immediately if there is a smart meter.

39 **A. Have the health effects you experience as a result of smart meters affected your**  
40 **ability to interact socially with others? If the answer is yes, describe how.**

1  
2 A. Yes, of course. I am avoiding going places that have smart meters. It limits where I can go  
3 and who I spend time with.

4 **Q. Have the health effects you experience as a result of smart meters affected your**  
5 **ability to access public services, such as the public library, government offices? If the**  
6 **answer is yes, describe how.**

7  
8 A. Not yet.

9  
10 **Q. Have the health effects you experience as a result of smart meters affected your**  
11 **ability to access religious or spiritual services? If the answer is yes, describe how.**

12 A. I am involved with a meditation group. I have not been attending programs because I  
13 experience symptoms if I am in the building for an extended period of time.

14  
15 **Q. Have the health effects you experience as a result of smart meters affected your**  
16 **ability to freely access health services? If the answer is yes, describe how.**

17 A. Not yet.

18  
19 **Q. Have the health effects you experience as a result of smart meters affected your**  
20 **ability to perform one or more major life activities not already mentioned? If the**  
21 **answer is yes, describe what activities and how the effects have affected your**  
22 **performance of these activities.**

23 A. So far I have been lucky. Most of the places I frequent do not have smart meters yet. I am  
24 not looking forward to the day when smart meters are everywhere. It will be a nightmare for  
25 me.

26  
27 **Q. What do you feel is a reasonable accommodation to allow you to perform major**  
28 **activities of daily living?**

29 A. A free opt out for everyone.

30 An analog meter option.

31 The Establishment of Smart Meter Free Zones and/or Facilities

32 The removal of smart meters everywhere.

**PRE-FILED DIRECT TESTIMONY  
OF [REDACTED]  
MPUC Docket No. 2011-00262**

**Q. Please state your name and address.**

A. [REDACTED]

**Q. Was a smart meter installed at your residence?**

A. Yes. PG&E gas & electric smart meters were installed in January, 2010. Attached as Exhibit A is a photograph of the electric smart meter (Landis + Gyr) that was installed.

**Q. Was the meter removed and replaced with an analog meter at your request?**

A. In January, 2012, I called and wrote to PG&E, asking them to immediately remove and replace the smart meters that were making me so sick. The PG&E spokesman I reached on the phone read rather woodenly from some kind of prewritten script, repeating over and over again how "smart meters are harmless." I explained to him that I have a degree in physics from [REDACTED], and am well aware that many kinds of radiation that we currently don't have health standards or studies for are far from harmless, and that I was certain I am experiencing extremely negative effects from smart meters installed on my home. Eventually, this so-called "help" line staffer informed me that there was nothing I could do—there was no way (yet) to opt out.

A few weeks later, I attended and spoke at a public hearing of the California Public Utility Commission (CPUC) in San Francisco. Dozens of people spoke about how they, too, have been adversely affected by smart meters, and I was shocked to hear reports of people who have become so electro hypersensitive that they are living in their cars. Beginning in February 2012, California residents in Pacific Gas & Electric's territories could opt out, for an initial price and an on-going monthly extra charge. On February 8, 2012, the gas and electric smart meters on my home were replaced with analog meters.

**Q. Are you paying the opt-out fees?**

A. Yes.



**Q. Please describe the symptoms and adverse reactions you have experienced.**

**A.** I noticed I was having daily nosebleeds and migraine headaches in October 2011. In November, I got a welcome break from home and spent ten days in a smart-meter-free area in Maui. . . where all my symptoms cleared up and I felt fine. That's when I started wondering, "What's making me so sick at home?" When I looked up my symptoms and saw they matched "microwave sickness" very well, I began to suspect smart meters as the culprit at that point, and found information about people resisting the PG&E smart meter rollout in the San Francisco bay area.

I took no notice when smart meters were first attached to my house in January 2010, without notification by my utility, and without my express permission. I didn't notice that one by one, smart meters were being installed on homes to either side of mine, and all around my neighborhood. I didn't notice that slowly but surely, my entire city was being outfitted with smart meters... until one day in October 2011 I wondered why I awoke each morning feeling dizzy, with nosebleeds, blurred vision, ringing in my ears, and migraine headaches. I wondered why when I was just sitting and watching TV or reading, my heart would often skip a beat, and bizarre muscle tremors would inexplicably spasm muscles on my face, arms, legs, and all over my body as if I'd just been given an invisible electric shock.

When I spent ten days away from my home and away from smart meters in Maui, I was amazed at how much better I felt. Gone were all the symptoms which I'd been thinking might have been signs of sudden aging. When I returned home, all the aforementioned symptoms returned, and I wondered what could be causing them. In January 2012, a couple of months later, I caught strep throat and felt sicker than I'd ever been in my life. Unable to feel comfortable anywhere in the house, due to feelings of pain in my head, eyes, ears, heart, and all over my body I slept on the living room floor, and turned my full attention to the question of what, exactly, was making me feel so terribly sick.

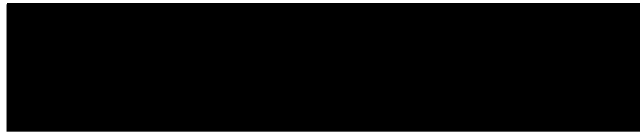
When I looked up my symptoms, I was amazed to find that many of them matched what used to be known as "microwave sickness." The first scientific report of microwave sickness appeared in 1974, with symptoms including: fatigue, headaches, palpitations, insomnia, skin symptoms, impotence and altered blood pressure. In cases of extreme exposure, symptoms also included: warming sensations, nausea, neuropathy (numbness, tingling, even paralysis in toes and fingers), stomach cramps, dyesthesia (a crushing sensation) and irritability. People in these studies had been accidentally exposed to microwave radiation, and no clear biological markers at that time were found, so these were not the kind of long-term studies that could establish safe exposure levels.

way that toxins are more easily carried into the brain.

With mounting questions from an increasingly concerned public wishing to know what is being installed in our homes, and interested in knowing what effects wireless smart meters have on ourselves, our children, our friends and our families, it's time we hold policy makers accountable for ensuring that a democratic, truly transparent decision-making process is taking place with respect to smart meters. The current "*Ready-Fire!-Aim*" approach to rolling-out wireless smart meters for the smart grid is negatively affecting human health and the environment.

Just as we recognized the proverbial "writing on the wall" with regard to technological wonders of their times: Agent Orange, Asbestos, CFCs, Diethylstilbestrol (DES), Dioxin, DDT, lead paint, and Thalidomide ... it's time for us to stop, wait for results from current scientific studies, do a thorough job gathering all relevant wireless smart meter information, engage in open dialogue all involved communities, and take a careful look at what role we really want wireless smart meters to have in our world today. If smart meters are harming increasing numbers of people, we potentially have a huge ticking time bomb on our hands... one that is leaving few habitable places left on Earth for growing numbers of individuals who have less and less tolerance for modern day electrosmog.

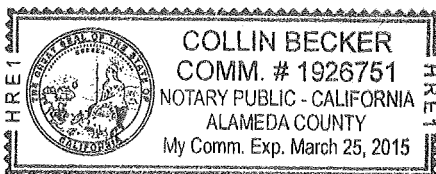
Dated this 9<sup>th</sup> day of January, 2013.



STATE OF CALIFORNIA  
ALAMEDA, ss:

January 09, 2013

Personally appeared the above-named [REDACTED], and stated under oath that the foregoing Affidavit made by her is true and based upon her own personal knowledge, information or belief, and so far as upon information and belief, she believes the information to be true. Before me,



[Signature]  
Notary Public/Attorney-at-Law

Collin Becker

Name Typed or Printed

My Commission Expires: March 25, 2015

EXHIBIT

A

Silver Spring Networks

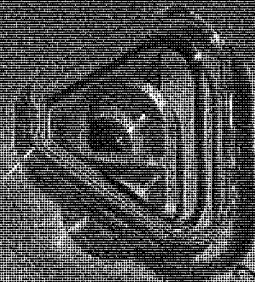
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FCC ID: OWS-NIC507

IC: 5875A-NIC507

WE TALKED



FOCUS AXR-SD

FORM 25 CL200 240V 3W 60Hz TA=30 Kh 7.2



\*NXL10061232961310\*

1006123296

PG&E

SmartMeter

AR 60 mHz

DS

104 670 748



Landis+Gyr

**PRE-FILED DIRECT TESTIMONY**  
**OF [REDACTED]**  
**MPUC Docket No. 2011-00262**

1    **Q.    Please state your name, address and contact information.**

2    **A.    My name is [REDACTED]**

3    **Q.    Was a smart meter installed at your residence?**

4    **A.    No.**

5    **Q.    Did you offer to provide testimony in another proceeding about your experience with**  
6    **smart meters?**

7    **A.    Yes. I have had serious health problems related to smart meters and to all types of digital**  
8    **meters (including smart meters and radio-off smart meters), and I offered testimony in a**  
9    **Michigan Public Service Commission hearing (Case No U-17053) reviewing a proposed opt-**  
10    **out program for Detroit Edison Company's Advanced Metering Infrastructure. I am an**  
11    **Intervenor in that case. This testimony was offered to show that an analog meter needed to be**  
12    **offered as a smart meter alternative. Unfortunately, the Commission struck this testimony,**  
13    **holding that the type of meter to be used in Detroit Edison's opt-out plan was not open to**  
14    **consideration and that, therefore, the health testimony was not relevant.**

15    **Q.    Is the attached document marked as Exhibit A a true and accurate copy of the testimony**  
16    **that you offered to provide to the Michigan Public Service Commission?**

17    **A.    Yes, it is.**

18    **Q.    Are the statements that you made in the attached Exhibit A still true and accurate?**

19    **A.    Yes.**

20    **Q.    Do you wish to add anything here not included in your statement in Exhibit A?**

21    **A.    Yes. Things took a turn for the worse when I spent a five days at my parents' in Arizona over**  
22    **Thanksgiving 2012. I have not slept well there for about a decade, but attributed it to the time**

1 change. In 2001, I slept really well. The next year, I couldn't sleep. I just tossed and turned  
2 and finally, after a very long time, would sleep fitfully. I thought it must be the bed, and  
3 moved to a different bed. It didn't help, but I stayed in that bed. Every year since, I have slept  
4 poorly, and wondered about the bed and the time change and wondered why, even if I spent  
5 two weeks there, I could not adjust and sleep.

6 The last two years, I basically haven't slept at all while there. Turns out, my parents  
7 have a Turtle meter on their home. It doesn't transmit wirelessly, but over the power line. It's  
8 digital. That's been on the home since 2002, which is about when I began experiencing a lot of  
9 difficulty sleeping. In about October or early November of 2012, my father told me that they  
10 had a digital meter on their home, and that he thought it had been put on about 4 years ago.  
11 This was actually good news to me, because I thought, *Well, I don't feel anything at my*  
12 *parents.* Everywhere there is a smart meter, I can feel the meter immediately when I enter the  
13 building, so I had made the assumption that if I couldn't feel it, it wasn't a problem for me (or  
14 at least not an immediate problem; from what I had read, I knew that down the road it could  
15 potentially be a health problem). I was so glad, because I felt like if worst came to worst, I  
16 could move back to Arizona and live in the electric cooperative district (Trico) that includes my  
17 parents' home.

18 I spent five days there sleepless, again wondering why I could not sleep and wondering  
19 why I couldn't adjust to the time change. The last day I was there, my father told me that the  
20 meter on their home is a Turtle meter. That night, as I lay sleepless, it suddenly dawned on me:  
21 I couldn't sleep because they had a digital meter! But then the question was, Why was it even  
22 worse the last two years?

23 When I got back to Ann Arbor, I continued to talk to my parents about this. My mother  
24 reminded me that two years ago, they got wireless. (My parents live in a very rural part of

1 Arizona, so a strong wireless antenna is required.) Clearly, the addition of the wireless to the  
2 dirty electricity already generated by the Turtle meter made the problem even worse! The  
3 bedroom where I sleep is about 15 feet from the wireless antenna (I didn't know there was an  
4 antenna nor where it was located until I spoke with my mother this year about it). In 2011 (the  
5 year the wireless was installed), I was there for 11 days, and exhausted the entire time. My  
6 sleep was abominable, although I actually did sleep. This year, I essentially did not sleep. I lay  
7 awake the entire night, tossing and turning, managing to grab a small amount of unrestful sleep  
8 early in the morning. I would awake exhausted, and spent the entire vacation, just like the year  
9 before, feeling terrible and barely able to function, barely being able to even take a walk,  
10 unable to read or do much of anything. This year, I would get up, walk a tiny bit, lie down for  
11 an hour, walk home, then lie down outside and try to sleep.

12 Interestingly, when I went to the Tucson International Airport to go home, I couldn't  
13 even feel the wireless in the terminal.

14 The cumulative effect that exposure to EMFs creates became apparent to me on the  
15 plane ride home, and afterward in Ann Arbor. I was in the plane, tired, just looking out the  
16 window (we'd probably been flying for about an hour, maybe less) and suddenly I got a  
17 headache. I attributed to the wireless on the plane (though I hadn't experienced that on the way  
18 out). As I said, I was looking out the window, and we were passing over wind turbines. I  
19 didn't think much of it. The headache passed within about 10 minutes. I was reading, about an  
20 hour later, and suddenly got a headache again. I stopped reading in order to be with my  
21 headache, looked out the window, and lo and behold, we were passing over another wind farm!  
22 Unbelievable. The headache passed as we moved away from the farm. I didn't experience any  
23 more headaches on the plane.

1 My ears rang intensely for 3 days after I got home, a high-pitched, intense ringing  
2 unlike anything I'd experienced before. The ringing has never stopped, two months later,  
3 though it's decreased in intensity. My body buzzed for three days, something I again had never  
4 experienced.

5 Since my visit to my parents, my sensitivity has increased many-fold. I went to the  
6 [REDACTED] Medical Library at the University of [REDACTED] on December 2, 2012. I felt a crush of  
7 what I now call one of the various EMF feelings I experience. I had never felt that in that  
8 library before. In fact, now that Ann Arbor was almost entirely installed with smart meters, I  
9 considered the University of [REDACTED] one of the few possible places I might spend time, since  
10 the university has its own power plant and presumably wouldn't be getting smart meters. I  
11 spent 3.5 hours at the med library. I felt really good and wired and awake when I got home  
12 around 8 p.m. That night, just like at my parents', I was unable to sleep the entire night. The  
13 next day, I was in the room of my house reserved for my occupation when I felt an EMF  
14 sensation. I couldn't understand it. The next day, I felt it again. I used a meter that measure  
15 voltage transients, and found out that one outlet in the room, an outlet into which nothing has  
16 ever been plugged, was emitting a high amount of transients. I checked it again the next day—  
17 I wasn't feeling anything strange, and the meter showed a normal reading. Since then, I feel it  
18 off and on.

19 The list could go on and on. On December 8, I felt something strange in my body, and  
20 sensation I associate with smart meters, though brief, and that I'd felt recently a few times in  
21 my kitchen. I noticed my neighbor using their garage door opener. It is only this neighbor's  
22 garage door opener that bothers me. The fluorescent lights at the outdoor farmer's market  
23 bothered me, yet another place I now cannot spend time in. On the 14<sup>th</sup>, I went to a friend's  
24 house that does not have a smart meter, for a meeting. I could barely stand it. She has



1 fluorescents, halogens, dimmer switches. I asked her to turn some of them off. I still did not  
2 feel good, and some time later asked her if we could move to another room where I knew she  
3 had incandescent lights. I still did not feel good. Then she told me she had wireless. She's had  
4 wireless for some time, but this was the first time I could feel it. Then, we left the house. I was  
5 walking about five feet behind two people as one of them, about five feet from her car, when  
6 suddenly, wham!, something passed through my falx cerebri (the connective tissue membrane  
7 that separates the two lobes of the brain) and a millisecond later I heard her car door opener and  
8 heard the beep of it. Even this I was now sensitive to. As I said, the list goes on, and the  
9 passage of time has not improved things. Even my computer is problematic, and I feel strange  
10 sensations coming from it. If I stay away from buildings with smart meters, fluorescent lights,  
11 and my computer for a few days, I recover to some extent—that is, I can then interact, briefly,  
12 with these devices without feeling anything. In my living room, I have had a dimmer switch for  
13 15 years, which I have always left turned up all the way because otherwise it bothered me.  
14 About a month ago, even that, turned up all the way, bothered me intensely, I kept the light off  
15 in my living room, illuminating the room by means of the lights from other rooms. I was  
16 finally able to put a regular switch on it a couple of days ago.

17 Everything I'd been told about increasing sensitivity is, sadly, coming true. I didn't  
18 think it would. I was not going to be that person. I was going to conquer this sensitivity.

19 I believe that the switched mode power supplies are as much of a problem as the RF.  
20 Non-analog meters may solve the problem for some people, who are only apparently sensitive  
21 to wireless, but they will not solve the problem for many of us. My experience at my parents'  
22 makes that clear, as does the sensitivity I have always had to fluorescents.

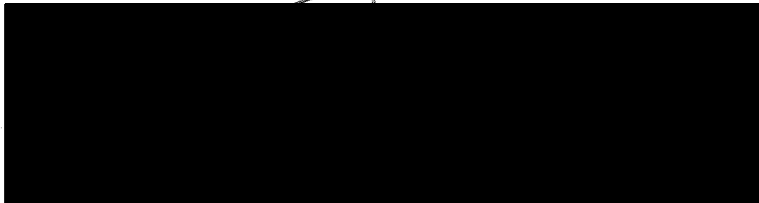
23 I also want to add that in the testimony I submitted in U-17053, I noted that I could no  
24 longer go inside my bank for banking purposes and switched to using an ATM. Since that



1 testimony was written, the bank installed new ATMs that have all sorts of lights around them. I  
2 can no longer use those ATMs. I have switched to using the night drop to deposit my checks,  
3 which is not always a good option because the money will not be picked up until the following  
4 day and because I cannot check my balance except over the phone.

5 Q. Do you want to submit the statements in Exhibit A to the Maine Public Utility  
6 Commission for consideration in its pending proceeding to investigate the safety of smart  
7 meters?

8 A. Yes. I submit the attached sworn testimony in support of complainants Ed Friedman, et al in  
9 their case before the Maine PUC as evidence that smart meters are not safe.



STATE OF MICHIGAN  
WASHTENAW, ss

January 28, 2013

Personally appeared the above-named [REDACTED], and stated under oath that the foregoing Affidavit made by her is true and based upon her own personal knowledge, information or belief, and so far as upon information and belief, she believes the information to be true. Before me,

Mary Geneva Rickard  
Notary Public  
MARY GENEVA RICKARD  
Name Typed or Printed

My Commission Expires: FEB 12 2017

MARY GENEVA RICKARD  
NOTARY PUBLIC, STATE OF MI  
COUNTY OF LIVINGSTON  
MY COMMISSION EXPIRES Feb 12, 2017  
ACTING IN COUNTY OF WASHTENAW

# EXHIBIT A

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application and request )  
of the DETROIT EDISON COMPANY seeking )  
approval and authority to implement its ) Case No U-17053  
proposed Advanced Metering Infrastructure )  
opt out program. )

QUALIFICATIONS AND DIRECT TESTIMONY OF



QUALIFICATIONS OF [REDACTED]

1 Q. Do you swear that the testimony you are about to give is the truth, the whole truth,  
2 and nothing but the truth?

3 A. I do.

4 Q. Please state your name, address and contact information.

5 A. My name is [REDACTED]

6 Q. On whose behalf are you testifying?

7 A. That of myself as Intervenor.

8 Q. What are your qualifications to testify?

9 A. I take my electric service from Detroit Edison. I have been affected by the smart meter  
10 installation in multiple ways: my health, my ability to earn an income, my ability to perform  
11 major activities of daily living as defined by the Americans with Disabilities Act, my ability  
12 to attend religious and spiritual services, my ability to access government services and  
13 health-care services. My health is negatively impacted by the nontransmitting digital meter  
14 Detroit Edison proposes as an alternative to the smart meter.

1     **Q.     What is the purpose of your testimony?**

2     A.     To provide information that establishes that there is a need for a no-fee opt-out and the  
3     need for an analog meter option. To provide information that may help the Commission in  
4     determining that smart and digital meters create certain kinds of economic, medical, social, or other  
5     harm or hardship, as outlined in Intervenor Linda Kurtz's Petition for Intervention, to some or all  
6     persons such that Detroit Edison and the Commission must not require those who are or who are  
7     likely to be so harmed to have a smart or digital meter placed on their home or place of business or  
8     to be otherwise deprived of rights and liberties, as outlined in Intervenor Kurtz's Petition for  
9     Intervention, by the deployment of the advanced metering infrastructure, smart meters, or digital  
10    meters, and, in the alternative, that such persons must be able to avoid such harm to their person  
11    and property without being charged a fee

12   **Q.     How long have you lived at your current residence?**

13   A.     I have lived in my home since 199. I own my home.

14   **Q.     What has your experience with smart meters been since your first encounter with**  
15   **them?**

16   A.     It has been terrible. There is the health aspect and then there is the social aspect.

17   **Q.     Tell us about the health aspect. What health effects have the smart meters had on**  
18   **you?**

19   I will list them.

- 20           •     Insomnia. If I am in a building with smart meters for more than about 15 minutes, I  
21           cannot sleep that night. Moreover, if I am in a building with smart meters for a half  
22           hour or more, or for short periods of time over several days, I am unable to sleep for  
23           several days.
- 24           •     Heart palpitations. The same as with the insomnia, although I do not *always*  
25           experience the heart palpitations when exposed. However, when I do get them, they  
26           can go on for several days.
- 27           •     Cognitive dysfunction. This is especially present when I am in a building that also  
28           has a lot of wireless in it already. I forget what I came to the store to get. If I am  
29           talking to someone, I cannot keep track of my thoughts. I have a thought, and then I  
30           cannot complete it. I want to think and I cannot. I forget words. It is like being old  
31           long before your time.
- 32           •     Anxiety in my body. This isn't a mental anxiety—it is a physical feeling, *not*  
33           accompanied by anxious mental thoughts.
- 34           •     Pressure in my head, as described above.
- 35           •     Pressure in my body, as described above.
- 36           •     Occasionally, headache or incipient migraine.
- 37           •     Tinnitus, sometimes.

1 Inevitably, I get the insomnia. Inevitably, if in a building for more than 15–20 minutes, I get  
2 the cognitive dysfunction. Inevitably, if I am in a house for more than 5 minutes, I get the  
3 pressure and other weird sensations, as well as the agitation/anxiety in my body. If I am in a  
4 bigger building, it may take up to 10 minutes to feel these sensations, though it usually  
5 happens more quickly. And sometimes, especially if it's a house, I feel them the moment I  
6 cross the threshold.

7 I have sometimes been barely able to sleep for 3 days and have had heart palpitations for  
8 three days after being in a building with smart meters. My second encounter with smart  
9 meters occurred toward the end of June (June 22–23), when I was forced to be in buildings  
10 with smart meters for hours two days in a row. One of these encounters was at my doctor's  
11 office, again, where I did not know they had been installed. However, the moment I stepped  
12 over the threshold of the building, I could tell they were on the building. After the incident  
13 at my doctor's I had heart palpitations for the next three days.

14 On top of all this, I have now become more sensitive to all sorts of electrical and wireless  
15 devices. This did not happen immediately. But now, there is hardly a building in Ann Arbor  
16 without a smart meter, so in order to do anything, I must be exposed to them. I have to get  
17 groceries, I have to do other errands. I do them as quickly as I can, but I cannot do  
18 everything in under 10 minutes. About a month ago, I began to notice that I was bothered by  
19 things that had never bothered me—the cordless phones in my home; sometimes the  
20 headset from my cell phone (the EMF travels up the wires); fluorescent lights in buildings  
21 that don't have smart meters on them, wireless in the Michigan League. With the fluorescent  
22 lights, I will feel the same agitation in my body and a very strong desire to leave the store  
23 immediately.

24 The effect on me is much, much worse in a home than, usually, in a big building. I assume  
25 that that is because the walls in a home are much closer to me--thus all the currents are  
26 closer to me and have greater impact. Also, the smart meters are way, way closer in a home.  
27 In one friend's house, if I stood in her kitchen, the meter would be five feet away from me,  
28 and that is standing as far away from it as possible.

29 **Q. How do you know it's smart meters that are affecting your health?**

30 A. It's obvious. When I step over the threshold of a building, I know whether there's a smart  
31 meter on the building because I can feel it. I feel all these weird sensations, like I've  
32 described above. Then, I don't sleep that night. And/or I get heart palpitations. And/or the  
33 other symptoms I've listed. Buildings that I was once fine in, one day I step inside, and it  
34 feels terrible. And so I know the smart meters have been installed.

35 Moreover, nothing else in my life has changed. When I heard about smart meters, I was  
36 concerned, but very hopeful that they would not bother me, since my cell phone did not  
37 bother me.

38 **Q. Did you have these problems before smart meter installation?**

1 A. Before smart meter installation, I rarely experienced insomnia. Poor sleep, yes; insomnia—  
2 very rarely.

3 Heart palpitations—I had a strange feeling in my heart many years ago, different than what  
4 I feel now. It was as if my heart were beating very fast. It lasted for a few days and never  
5 came back. This was different than what happens with smart meters.

6 Now that smart meters are everywhere in Ann Arbor, I sometimes feel strange sensations in  
7 my heart even when I have not been in a building with smart meters for a day or two. The  
8 first time I got that feeling was after being in my doctor's office and the other buildings.

9 Cognitive dysfunction—occasionally, but rarely to the degree I experience with smart  
10 meters and certainly not a *sudden* change from clear-headed, incisive thinking to sudden  
11 cloudiness. I have mitochondrial dysfunction, so I have periods of fatigue, and sometimes  
12 that is associated with trouble completing a thought or finding the right word. But that is  
13 something that creeps up slowly—it doesn't happen nearly instantaneously. With smart  
14 meters, I step over the threshold of a building with smart meters and within a few minutes  
15 to ten or twenty minutes, my brain goes in and out of working, I lose thoughts, there are  
16 empty spaces in my thinking. Yesterday, I had to be in a building with smart meters,  
17 interviewing someone. I could feel the smart meter the moment I stepped over the  
18 threshold. I didn't in fact know whether this meter might be installed on this building, but I  
19 asked my interviewee. She said there was. I felt pressure like a vise around my head, and a  
20 weird vibration in my body. About 20 minutes into the interview, I was no longer able to  
21 think, to ask questions. With a lot of effort and time, I could make some headway, but only  
22 with some help from the person helping with the interview. I'd also like to add that this  
23 interviewee, like several other people I have interviewed who have positions of authority in  
24 the community—doctors, people with directorial or supervisory roles in government—have  
25 given an interview, then consulted with their attorneys and told me not to use their  
26 interviews. These are people who have been made sick by the smart meters and are also  
27 seeing the effects on the people they treat, provide services to, and/or supervise. They have  
28 been excited about providing information and being heard. Then, they consult an attorney  
29 and refuse to testify. Everyone is so afraid of DTE.

30 Pressure—no.

31 Bodily sensations of agitation—no.

32 Headaches or migraines—occasionally.

33 Tinnitus—I have had a very, very mild tinnitus at least since the age of 12, but not even  
34 enough to remark to the doctor about. However, with smart meters, I can have the kind of  
35 tinnitus that people normally describe: the buzzing isn't something so mildly in the  
36 background you barely notice it; it is front and center.

37

1     **Q.     When did you first notice that your health was affected by smart meters?**

2     A.     The first time I ever encountered a smart meter was sometime in June of 2012. Someone I  
3     knew peripherally invited me over to her house. I walked into the house, which was on Huron  
4     Street in Ann Arbor, and was nearly bowled over. It is really hard to describe the effects one feels  
5     from something like this because they are not sensations we experience in normal life and so we  
6     don't have good words for them. There was a way in which it was like being pressed upon from all  
7     sides, sort of like the pressure you feel when taking off really, really quickly in an airplane, the kind  
8     of pressure I imagine astronauts feel. That pressure was all over my body, though that particular  
9     type of pressure was probably slightly less in my head.

10    In my head, as I stood, and later sat, in that house, it felt like something would shoot in. Not like a  
11    shooting pain. It was wider than a pain, and it wasn't painful per se, though it was extremely  
12    unpleasant. It was as if what I can best describe as "empty rays" shooting through my head from  
13    time to time. Like two or three, and then it would stop for a while. It was really, really weird.

14    I found that my body was becoming agitated. It wasn't a mental agitation, per se, but an agitation of  
15    my body. It quickly became hard to think. I would lose my thoughts.

16    I can tell you more about what it was like, and this has been my experience in other houses with  
17    smart meters: It is like you are in the middle of a funnel cloud of electromagnetic current—you are  
18    encircled by these currents and can feel them. That is what is really weird about it. Then, on top of  
19    that feeling, these "empty rays" pass through your head from time to time. Like I said, these are  
20    wide, and sort of like a light beam in that they are kind-of empty inside. I know this sounds weird,  
21    but think of how science fiction writers describe things. This *is* science fiction. Science fiction  
22    writers have been incredible predictors of the developments of the future—and we are now living  
23    in some of that world.

24    Those "empty rays," when they pass through, it is like for a moment or two your thought processes  
25    stop. It is really weird, because it is so quick you know it's happening and yet you don't. If you have  
26    ever had general anesthesia administered, then you might have an inkling of what it is like. When  
27    they administer general anesthesia, you are fully present and then suddenly there is this huge blank  
28    space. When you get anesthesia, the blank space (the loss of consciousness) lasts for a long time—a  
29    half hour to several hours. With a smart meter, it is so brief. But it can happen repeatedly. And in  
30    that moment, you are blank. And aware a millisecond later that you *were* blank. It's very unsettling.  
31    You know it is happening—just like when you are coming out of anesthesia, or when they haven't  
32    administered enough—yet you can do nothing about it.

33    As I read more about the effects that smart meters can have on the human system, this experience  
34    made sense: It is interrupting the communication of the nerve cells in my central nervous system.  
35    As a biodynamic craniosacral therapist and a student of human anatomy and physiology, I learned,  
36    as we all did in school, that neurotransmission is an electrical and chemical phenomenon.

37    **Q.     You described being in a funnel cloud of electromagnetic radiation.**

1 A. Yes. As time went on, it came to me that that is the best description, and, on my own, I  
2 figured out why. Later, as I did more reading, I found out that what I figured out on my own was  
3 exactly what any electrical engineer or electrician would tell you about what was happening. You  
4 see, in a home, you are surrounded by wires, encircled by them as they pass behind every wall.  
5 They are also often above you, in the ceiling, and below you, in the basement. And if you are in a  
6 house like that first house I was in, which was three stories, each tenant has their own electronic  
7 equipment on, pulling electricity through the house, and the funnel cloud is very, very high, much  
8 higher than in a ranch house. So in a multi-storied house, the effect—at least this is my  
9 experience—is increased. You feel like you're are in a soup of vibration and also that that suddenly,  
10 out of nowhere, a current will shoot transversely through your body. I couldn't figure out why there  
11 were these multiple sensations--vibration and these currents or rays. But then I learned that the  
12 *magnetic* part of the electromagnetic field runs at right angles to the electrical field. So you have  
13 these currents encircling you as you sit in a room (and probably running above you and below you  
14 to a usually lesser degree) and *in addition* to that electrical field encircling you, you have the  
15 magnetic field running perpendicularly out to you. I wonder whether the "empty rays" I felt are  
16 those magnetic fields or whether they are the radiofrequency hot spots from intersecting smart  
17 meter RF waves.

18 Now, please understand that I learned all this terminology after my first encounter with smart  
19 meters. You know, this is the interesting thing about science. In science, we *observe* phenomena.  
20 Then we seek to explain it. Despite what is commonly taught as how the scientific method works,  
21 most science is actually done inductively, not deductively. Thus, we observe phenomena, we seek to  
22 explain it. We don't waltz in with a theory and attempt to prove it. Here, the phenomena are these  
23 extraordinary sensations in the body and other physiological phenomena: momentary lapses of  
24 consciousness, tinnitus, agitation, inability to think, and so on. When I first felt them, I had no idea  
25 what was going on. But I could feel the sensations. Thus, I could ask the question, "What is causing  
26 this?" And the simple, but in some ways not terrifically informative answer is, "Smart meters." But  
27 *how* do they cause it? And that is where an understanding of how the currents work—the electric  
28 *and* the magnetic fields—comes in. Once you understand that, the seemingly crazy becomes  
29 explicable. Like gravity. None of us can see it, but all of us can feel it. And it exerts a powerful yet  
30 invisible force on our bodies.

31 That is part of why this sensitivity to EMF is so hard to grasp. You can't see electric fields. You can't  
32 see magnetic fields, either, though you can see how the magnetic fields operate if you get a magnet  
33 and some iron filings. It's so hard for anyone to believe that something you cannot see is wreaking  
34 havoc with your ability to think and sleep and your heart to function properly. I completely  
35 understand. I am very sensitive to these fields, but not as sensitive as some people I know, and  
36 when they say that they can feel something, for instance, effects from a cell phone tower, I feel a lot  
37 of skepticism. It's human nature to mistrust someone else's experience when we've never felt it. So I  
38 understand why people who can't feel it are skeptical

39 But remember this, we can't feel cancer, we can't feel the AIDS virus, we can't feel when we've  
40 swallowed a batch of E. coli, and most smokers don't feel bad when they smoke, yet *each one of*  
41 *those things is invisibly killing us*. We should have learned by now that just because we can't see it or



1 can't feel it doesn't mean it's not real. And just because we can't see or feel it doesn't mean it's safe!  
2 Someone who is contracting a sexually transmitted disease is probably feeling great while they are  
3 contracting it!

4 **Q. Did you know there was a smart meter on the first house you encountered with a**  
5 **smart meter?**

6 A. No, not when I went over there. Once I was in the house and felt all these terrific pressures  
7 and sensations, I asked if there was a smart meter on the house. I went outside and looked and saw  
8 *three* smart meters on the house. I had learned about smart meters a few weeks earlier. Someone I  
9 know peripherally had sent out an email talking about smart meters and how badly they were  
10 affecting her health. I didn't know if I would be affected, but I thought there was a chance. I didn't  
11 know what a smart meter looked like, but since these meters didn't look like my own meter and had  
12 a digital read-out, I assumed they were smart meters. Also, they had blue on them, which I later  
13 learned is characteristic of the Itron smart meters.

14 **Q. Why did you think you might be affected?**

15 In 2008, I was given a laptop computer. I was so excited. I would be able to do computer work  
16 outside or go to a coffee shop and cruise the Internet. I work out of my home, so to be able to go to a  
17 place where there were other people, or to be outside in nature, was important to me. Well, I went  
18 outside, turned the computer on (while holding it on my lap), and within a little bit of time began to  
19 feel a bit weird. By the time I'd been on that computer for a half hour, I was feeling strange, woozy,  
20 not able to think well. I persisted. "I'm not going to give in to this feeling," I thought.

21 **Q. How did you know it was the laptop?**

22 A. Well, it was pretty obvious. I turned it on, and in less than half an hour I felt ways I'd never  
23 felt before. I was so frustrated. I also knew why I was likely feeling this way. I'd had a client the  
24 month before, a young guy, college student, who had come to me for craniosacral therapy. He told  
25 me he couldn't use his computer, couldn't use his cell phone, couldn't even watch TV. At first, it was  
26 just that he couldn't use the computer, but then it was all these different electronic devices. He said  
27 it was called *electromagnetic sensitivity*. Since I'd just been in a study group with someone who'd  
28 mentioned learning about this type of thing, I had an inkling of what he was talking about and didn't  
29 think he was coming from out of left field. But not in a million years did I think I would have that  
30 problem! I thought it was sad for him.

31 **Q. So how did you resolve the problem with your laptop?**

32 A. I called the place I got the computer from. The guy told me how to shut the wireless off. I  
33 was so bummed! I did it. It was slightly better, but still impossible for me to use this \$1000  
34 computer that could not be returned!

35 So, I talked to the guy again, and he told me to try taking the wireless card out. I did that, and I can  
36 use the computer just fine. And, in fact, the LED screen is a thousand times better than the CRT  
37 screen I had before, which would make me exhausted. This screen doesn't tire me out to the same

1 extent—less flicker, less dirty electricity, all that. Everyone knows CRTs are much harder on you,  
2 just like fluorescent lights.

3 **Q. Do you experience problems with other wireless or electrical devices?**

4 A. Some, but not all. Wireless in a room, at least before the installation of smart meters, was  
5 not a problem for me. Like many people, I went to coffee shops to work on my computer, and there  
6 is wireless at all of them. Perhaps I was affected in some kind of way (and from what I have now  
7 learned about the hidden, unfelt effects of RF radiation on the human body, I probably have been),  
8 but it was not anything I could directly feel.

9 Dimmer switches have always bothered me. I can hear the buzz if they are not turned all the way  
10 up, and they make me feel weird if they are not turned all the way up. I feel that agitation I  
11 described earlier.

12 Most CFLs I cannot stand, though certain ones I can tolerate.

13 Fluorescent lights exhaust me, like they do many people, if I am under them for a few hours, but,  
14 prior to the installation of smart meters, I could not *feel* anything from most of them. It's just that I  
15 would be fatigued after being around them.

16 My cell phone does not bother me, at least not now. We have measured the RF output from it, and it  
17 is extraordinarily low. It is an old phone by today's standards—a 2008 model. But I never put it to  
18 my ear—I use a headset and I often keep it shut off unless using it. Except for when I am walking, I  
19 do not carry it next to my body.

20 But here is the clincher. When I received the laptop, I also got a wireless router, of course. I never  
21 used it, never even opened the box because of that initial experience outside. But earlier this year, I  
22 needed a router. I called the computer store, and the guy told me I wouldn't have any problem with  
23 the router. I wasn't too sure about that, but he was, so I decided to try it. I plugged it into the wall  
24 and *immediately* I felt something happen to my heart. Unbelievably scary—like it was being  
25 penetrated by a current, by something that would twist it—right where the aorta enters the heart. I  
26 pulled the plug immediately.

27 Also highly relevant, when I walked into Best Buy a few years ago, I felt all sorts of strange  
28 sensations—a lot of things like I feel now with the smart meters. I couldn't really figure it out, but  
29 came to the conclusion that they must have added wireless throughout the store and that was what  
30 had changed. That made me a little concerned, because I knew that many coffee shops, at that time,  
31 were adding wireless, but I didn't have those sensations anywhere else. I figured that the amount  
32 and density of computer and stereo equipment in that store must be what made the difference. I  
33 now suspect that the switched-mode power supplies in the equipment, combined with extremely  
34 strong wireless, were what caused these feelings. I could barely stand to be in there, and from then  
35 on, I never went to Best Buy unless I absolutely had to buy something, and I got in and out as  
36 quickly as I could. But I didn't worry about it per se, I just figured it was Best Buy, since I didn't  
37 experience these things anywhere else.

1 Similarly, but to a lesser extent, when I went to Ace Hardware on Stadium Boulevard a couple of  
2 years ago, or maybe only a year ago, I noticed something different. I would get 15, maybe 20, feet  
3 away from the checkout counters, and I would feel strange and uncomfortable. Not the same way as  
4 in Best Buy, and certainly not as intense, but something along the same lines. I didn't like it at all. I  
5 was fine in the rest of the store. I noticed all the clerks were walking around with headsets. I figured  
6 it must be the wireless current. I didn't know much about that sort of thing then.

7 Oh, and once that happened, after a few months, the things you swipe your credit card through--in  
8 some stores--specifically, Whole Foods and Ace Hardware--those card readers started to bother me  
9 when I was close to them. There was this incredible intensity that came out of them. I think both  
10 Whole Foods and Ace changed their card readers, because at some point this year, they didn't  
11 bother me anymore. And note: I wasn't bothered at any other store, so clearly what is transmitted  
12 through some is not transmitted through others.

13 Finally, I have a new washing machine, bought in June. It's computerized. Every time I press the  
14 buttons, I feel jolts in my head. It's a quick click, as fast as the push of a button. This would have  
15 been unbelievable to me, but by the time I had this experience, I had read about voltage transients,  
16 so at least I knew what was going on. What I do in order to be able to use the machine is put the lid  
17 up to block the control panel. Then I bend down so I'm at the same level as the lid to keep the  
18 current from hitting me. I have to count the number of times to punch each button so that I can do it  
19 without seeing. Yeah, it sounds crazy, but it's true. And it makes sense, because the thick metal of  
20 the lid blocks most of the rays.

21 **Q. You live near a cell phone tower. Does that bother you?**

22 A. I live 1000 feet from a huge cell phone tower. When I first noticed it, quite a few years ago, I  
23 got worried, because I'd heard that they could be bad for your health, but I realized that nothing felt  
24 different to me. I was still sleeping okay, too. I think this is really important: The utilities tell us that  
25 smart meters aren't bad for us, yet I am terribly affected by them, can feel them throughout my  
26 body, they give me insomnia and heart palpitations, yet I can live next to a cell phone tower for  
27 years and not feel these strange sensations nor have these *palpable* health effects (it may be  
28 affecting my health, but I cannot *feel* it).

29 **Q. Have the health effects you experience as a result of smart meters affected your**  
30 **ability to work and earn a living? If the answer is yes, describe how.**

31 A. Yes. I work for myself as a [REDACTED] therapist and [REDACTED] therapist, and I  
32 [REDACTED] It affects my fatigue level and thus my competence and productivity; I cannot  
33 take a job outside the home; I cannot keep up my continuing education credits and thus my  
34 license.

35 When I have been unable to sleep because of smart meters, I cannot do [REDACTED] When I am  
36 unable to sleep because of smart meters, I am not as good a [REDACTED] as I can be.  
37 Furthermore, business this summer slowed considerably. I began to consider seeking work  
38 elsewhere, perhaps partnering with another health-care practitioner, and realized that with

1 the deployment of smart meters, this was an impossibility. There is absolutely no way that I  
2 can work in a building with smart meters. I can't be in a building with smart meters long  
3 enough to get a massage, let alone long enough to give them all day!

4 Because of the deployment of smart meters, I was unable to attend my biannual [REDACTED]  
5 [REDACTED] therapy conference in Maryland. I was so looking forward to this educational  
6 and networking opportunity, especially because I am past president of the association and  
7 its current journal editor. But in early September, I found out that smart meters had been  
8 deployed in Maryland and I knew they were likely installed at the conference site. Which  
9 they were. Part of my compensation as journal editor is that my expenses to, from, and at  
10 the conference are paid for. I was unable to attend. I suspect that I will never be able to  
11 attend a conference again. Not only will I not receive this compensation that I am owed (at  
12 this point, the equivalent of \$5000), my ability to earn an income is severely limited because  
13 I will not be able to keep up with developments in the field. BCST is a hands-on work. It is  
14 not a skill that can be learned from reading books or taking a course online.

15 Furthermore, I had begun taking workshops on Hellinger work, which is a type of therapy I  
16 can use as an adjunct in my work. Because smart meters have been deployed at the Ann  
17 Arbor location where these workshops are held, I can no longer learn this modality. Like  
18 BCST, it is a work that must be learned in in-person collaboration with others.

19 Moreover, each year, I attend the annual [REDACTED] therapy conference here in Ann Arbor. I  
20 also practice Polarity Therapy. The building where those workshops are held has also been  
21 smart metered, and I will never be able to attend the conference again. There is no way that  
22 I can spend 3 hours a day in a smart metered building, let alone 8 hours a day for 4 or 5  
23 days.

24 I will be unable to keep my [REDACTED] therapy license because of this. To be completely clear:  
25 Michigan has passed [REDACTED] therapist licensing. No licenses have been issued yet, but as of  
26 November 2009, all [REDACTED] therapists who wish to be licensed must be getting continuing  
27 education credits. These credits include the modalities listed above, as well as [REDACTED]  
28 therapy courses, which I also attend. I can no longer get these credits.

29 So what am I to do? Stop practicing? Go on welfare? Flout the law and hope I don't get  
30 caught?

31 **Q. Have the health effects you experience as a result of smart meters affected your**  
32 **ability to interact socially with others? If the answer is yes, describe how.**

33 **A.** My social life has dwindled to nearly nothing. I am unable to be in the home of any friend  
34 because every friend has a smart meter on their home. I cannot meet a friend for dinner, go  
35 to a movie. I cannot date, because I can't go anywhere.

36 Earlier this year, I joined a number of great Meetup groups. These are social groups where  
37 people with similar interests get together weekly, monthly, perhaps a few times a week. I

1 was having a great time with the [REDACTED] Group, and others. I had to  
2 quit every one of those groups because of smart meter installation.

3 There is another group I belong to that meets in the winter and spring. I just realized that I  
4 am not going to be able to attend that group anymore. I am not going to be able to go to the  
5 annual Christmas party for the spiritual center I was a part of until the installation of smart  
6 meters made it impossible for me to attend functions at the center.

7 You know, I shop at a co-op, and I used to eat there, hang out there, work on my computer  
8 there. It's a social hub in Ann Arbor. I can be certain that I'll see someone I know at least  
9 every other time I go there. I can chat. Have a conversation. Catch up with people I wouldn't  
10 otherwise see. All that's over. I have to get in and get out, or I pay for it by not sleeping for  
11 the next one or two days.

12 Have the health effects you experience as a result of smart meters affected your ability to  
13 access public services, such as the public library, government offices? If the answer is yes,  
14 describe how.

15 Yes. I love going to the library, especially browsing the book sale. I was so grateful that I was  
16 still able to go to the library. Then, one day a couple months ago or so, I walked into the  
17 library and knew it had been smart metered. The cognitive dysfunction, the weird feelings  
18 in my body, incipient headaches. It wasn't quite as bad in the basement, where the book  
19 sales are held, but the last time I went there, it was really, really bad in the basement.

20 So now, I get in and get out. I can't browse. And libraries are for browsing.

21 If I wish to speak to my city council on any issue, including the smart meter issue, I have to  
22 weigh the ill effects on my health vs the possibility that my words will have an influence. I  
23 have attended council and environmental and Washtenaw County Commission meetings  
24 several times in the last year on a variety of issues, but if I do now, I will wind up not  
25 sleeping for one to two nights and experience the cognitive dysfunction, etc. I have already  
26 discussed..

27 **Q. Have the health effects you experience as a result of smart meters affected your**  
28 **ability to freely assemble outside? If the answer is yes, describe how.**

29 Yes. There are several places in Ann Arbor that I cannot tolerate being because of the  
30 incredibly high RF in those areas. This includes parts of Washington and Liberty Streets,  
31 where marches often take place.

32 **Q. Have the health effects you experience as a result of smart meters affected your ability**  
33 **to access religious or spiritual services? If the answer is yes, describe how.**

34 **A.** They have utterly affected it. I can no longer attend talks or services at the center I once went  
35 to. I want to explore several other religious/spiritual communities in Ann Arbor, and also  
36 attend talks, but now I cannot. If a friend dies, how will I attend their funeral? One friend died  
37 in April of this year. At least there were no smart meters then, and I could attend his wake.

1 The monthly spiritual group I am a part of can now meet only at my home or the home of  
2 one woman whose home has not yet been installed. Soon we will be able to meet only at my  
3 home. It was important to people to rotate the gatherings, but we will no longer be able to  
4 do that unless I drop out.

5 My spiritual life is very important to me, and an integral part of the work I do as a therapist.  
6 Yet one more avenue of self-realization, community, and education has been cut off from me  
7 due to smart meter installation.

8 **Q. Have the health effects you experience as a result of smart meters affected your**  
9 **ability to freely access health services? If the answer is yes, describe how.**

10 A. Yes. I told you about my experience at my doctor's. Recently, I needed to see my doctor  
11 again. I called the clinic and explained that I could *not* be in their building and wanted a  
12 referral to the specialist I needed to see. They refused, and said I had to come in. I waited  
13 out in my car, freezing, for one hour before they called me for my appointment (they were  
14 an hour late). Then, I had to be in that doctor's office, which is one of the worst buildings I  
15 have been in, for one hour for my appointment. I have pre-cancerous lesions on my face,  
16 hands, and legs. I had a choice: ignore them and potentially have them turn cancerous (I  
17 grew up in Arizona, and my sister has already had a malignant growth removed from her  
18 neck), or deal with the effects of the smart meters on my health.

19 I have visits to [REDACTED]'s Hospital in [REDACTED] once every three weeks for my Ehlers-  
20 Danlos. Once that building is smart metered, I don't know what I will do!

21 **Q. Have the health effects you experience as a result of smart meters affected your**  
22 **ability to perform one or more major life activities not already mentioned? If the**  
23 **answer is yes, describe what activities and how the effects have affected your**  
24 **performance of these activities.**

25 A. Yes.

26 Caring for myself. Going to the grocery store. Buying necessary clothing. Banking—once  
27 smart meters were installed at my bank (and I could feel it the moment I walked into the  
28 bank), I got an ATM card. I prefer to do all my banking with a person, not a machine, and  
29 had not had an ATM card for years, but got one the day I walked into the bank and could feel  
30 the smart meters. Getting my hair cut. Buying necessary materials for remodeling and  
31 maintaining my home.

32 Browsing a store.

33 Learning—both because I cannot attend the educational functions I need to and because of  
34 the cognitive dysfunction that inevitably occurs when exposed to smart meters for  
35 whatever reason. Furthermore, once I am exhausted and have insomnia because of smart  
36 meter exposure, I cannot think or learn.

37 Thinking—as described above.

1 Sleeping—as described above.

2 Interacting with others—as described above.

3 Reading—when exhausted, I cannot.

4 Concentrating—as described above.

5 **Q. DTE has asked the Commission for approval of a plan that would not allow anyone to**  
6 **keep their analog meter. Instead, those choosing to opt out of smart meter**  
7 **installation, if an opt-out is instituted, will be forced to take a nontransmitting digital**  
8 **meter on their house. Have you had experience with the nontransmitting digital**  
9 **meter?**

10 A. Yes.

11 **Q. What was that experience like?**

12 A. The nontransmitting digital meter makes me feel *horrible!* I was hopeful that when I went  
13 over to someone's house who had a digital meter that I would not be affected. I thought I  
14 *might* be, but I certainly did not expect what I encountered. I stepped over her threshold  
15 and my ears began ringing immediately. That is the first time that had ever happened to me.  
16 At that point, I had not experienced that with a smart meter. My body felt like it was  
17 buzzing. I could not stand to be in her house. It was every bit as awful as the smart meter.  
18 The only difference was, I did not feel those "empty rays." I left that house after about 7  
19 minutes. I couldn't stand it.

20 I was over there briefly one other time. I felt the same awful sensations in my body.

21 I experience many of the same physiological changes (anxiety sensations, which are due to  
22 cortisol, etc.) as with a smart meter. I cannot say whether they digital meter will cause me  
23 insomnia because I have never stayed in a house with a nontransmitting digital meter long  
24 enough to know whether that's a problem.

25 Several weeks after my experience with the digital meter the first time, I was at that same  
26 home a second time, again briefly, and experienced the same sensations as well as a  
27 pressure through my body.

28 **Q. In your experience, will the nontransmitting digital meter solve the health problems**  
29 **you experience with smart meters?**

30 A. No.

31 **Q. Are the nontransmitting digital meters an acceptable alternative to the smart meter?**

32 A. No, because they will not solve the health problems I and others experience. It is very clear  
33 to me from my personal experience that smart meters and digital meters—at least the new,  
34 nontransmitting digital meters—cause many of the same health effects. I had no idea of this

1 when I began investigating smart meters. I thought the problems with smart meters were  
2 solely because of the RF (radiofrequency) radiation. It was months before I came across  
3 information about switched-mode power supplies and how they might also harm health.  
4 Switched mode power supplies step the 240 volts coming off the power line down to 4–10  
5 volts to run the switched-mode power supply (SMPS). Analog meters don't need SMPS  
6 because analog meters don't need electricity to run.

7 The site I came across said *nothing* about how horrible the digital meters make you feel. They just  
8 cautioned that they might be harmful to health. It made you think about it in the same way  
9 you think about other things that we are cautioned are harmful to our health—you think,  
10 “Well, maybe it's a little bit harmful, but what isn't in this day in age?”

11 My experience in the house with the nontransmitting digital meter made it very clear to me that  
12 there is a lot of similarity between the smart meters and the new digital meter and that a  
13 huge portion of what I and others experience is due (at least in part, if not solely) to the  
14 voltage transients generated by the switched-mode power supplies.

15 I also want to emphasize very strongly that I have been in a house with an *old* digital meter, a digital  
16 meter that can't be converted to a smart meter. It was put on the house about 4 years ago.  
17 Being in that house is no different than being in my own home. The old digital meter is  
18 nothing like the new one. It is an entirely different experience!

19 Is there anything else you wish to say about how smart meters have affected your ability to perform  
20 major or minor activities of daily living?

21 Nothing except to say that smart meters have basically ruined my life. I have to live like a hermit,  
22 even though I am living in a city. I can't do any pleasurable thing anymore that involves  
23 anything outside of my home other than walking through the woods.

24 Moreover, with the near completion of smart meter installation in Ann Arbor in the last month—  
25 and therefore my inability to have a respite in any grocery store—I seem to have become  
26 more sensitive to every sort of electrical field. I am very afraid that I am going to become  
27 like that college student who came to see me—unable to use any sort of electrical product.  
28 At least he was still able to socialize with friends at their homes, a restaurant, a bar, go to  
29 church, spend time at the library. I can't even do that!

30 **Q. What do you feel is a reasonable accommodation to allow you to perform major**  
31 **activities of daily living?**

32 **A.** Well, it's very obvious. Smart meters must be banned, as must the digital meters that create  
33 these horrific voltage transients. It is amazing to me that all around the country,  
34 municipalities have been spending millions of dollars making every sidewalk in their  
35 jurisdiction conform to ADA requirements, *whether or not* any person with a mobility  
36 disability lives in that neighborhood. I am all for making things accessible. But the  
37 deployment of smart meters has made *every place—every building, every social setting, every*  
38 *home, some streets, every educational facility, every religious institution—inaccessible to me.*



1 Every person in a wheelchair can go to city hall, can get a special cart at the grocery store,  
2 can have a sign language interpreter present if need be, but I and others who are  
3 immediately and deeply impacted by the electromagnetic fields created by the installation  
4 of smart meters in every building in Michigan, are *barred* from every public space unless we  
5 make the choice to risk, in a very deep and real way, our health.

6 If they could find a way to do what they believe they need to do without impacting my health and  
7 that of millions of others, I would have no protest. I do not believe that smart meters are  
8 going to reduce energy consumption. Enough studies have shown that they've had no  
9 impact. But you know what, the government and private corporations misspend my money  
10 in numerous ways. I don't go to court over it; I don't spend every waking moment of my life  
11 fighting it. It's money. C'est la vie. But my health, my ability to sleep, to function, to earn a  
12 living, let alone visit with friends—that I must fight for. Because if a smart meter or a  
13 nontransmitting digital meter is installed on my home, I will—maybe quickly, maybe over  
14 the course of a year or two—die because of lack of sleep and the depression that results  
15 from such extreme fatigue.

16 The bare minimum that DTE and the MPSC must do is allow those of us who are so severely and  
17 immediately affected by smart and digital meters is to keep our analog meters so that we  
18 have at least some period of time in our lives where we are not surrounded by this  
19 electromagnetic funnel that so damages us. We must at least have some sort of haven in our  
20 homes.

21 The only way I am surviving right now is because my home does not have smart or nontransmitting  
22 digital meter on it.

23 **Q. Did you have health problems prior to the installation of smart meters? If so, what**  
24 **were they and when did they begin?**

25 A. Yes. Mitochondrial dysfunction (chronic fatigue), hyperthyroidism, and Ehlers-  
26 Danlos Type III hypermobility disorder. EDS is genetic (affects the connective tissue),  
27 hyperthyroidism was diagnosed around 2000 but was probably present years before, and  
28 mitochondrial dysfunction was definitively diagnosed in 2009 but has certainly been  
29 present since my later years in high school.

30 **Q. If you had health problems prior to smart meter installation, have those conditions**  
31 **worsened, lessened, or stayed the same since installation?**

32 A. If I am not exposed to smart meters, then there is no change. If I am exposed to smart  
33 meters, the fatigue is worse because I can't sleep. I do not know whether there has been a  
34 change in thyroid function as I have not had a thyroid test since installation.

35 I do not have a smart meter, nor a digital meter of any kind, on my home. If I did, I would  
36 likely be dead at this point, and I am not exaggerating when I say that. The sleeplessness  
37 and fatigue I experience when around smart meters for long render me incapable of doing  
38 anything. The depression that results from fatigue makes life seem meaningless—one has

1 no energy for life, no zest. The heart palpitations I experience would surely damage my  
2 heart so badly I would slowly die. The fatigue and cognitive dysfunction would make me  
3 incapable of earning any type of living, let alone taking care of myself and my home.

4 **Q. Is there anything else you wish to say about how smart meters have affected your**  
5 **health or your life?**

6 A. Yes. My heart feels weird a lot of the time now. I do not have smart or digital meter on my  
7 home, yet ever since that exposure in June at my doctor's, my heart has felt weird off and on.  
8 No matter where I go now, I am in the RF field from smart meters. Short of hiring someone  
9 or begging someone to do all my shopping, etc., I must be exposed to some extent to these  
10 meters.

11 The installation of these meters has devastated my social life. It is unbelievable and unconscionable  
12 that something that hurts so many people—I am not the only one—so tremendously has  
13 been allowed to be deployed in our society.

14 And I want to say that the digital meters DTE proposes to replace the smart meters affect me and  
15 others as badly in nearly every way as the smart meters. If that digital meter is put on my  
16 home, I will be as dead as I will be if a smart meter is installed.

17 DTE has its own reasons for installing these meters. What I astounds me is that their ignorance,  
18 myopia, greed, denial, or whatever it is, is apparently causing them to be *so* rigid, *so*  
19 uncompassionate, *so* unbending, and *so* uncaring that they would force people to put on  
20 their homes something that, quite literally, is going to kill some of us very quickly. Their grid  
21 is going to work whether or not a meter is installed on my home. It's working now, and at  
22 least 12 other people in my neighborhood have refused to let them install the smart meter.  
23 They've already ruined my life in many ways. The State of Michigan needs to ensure that  
24 even if I am forced to live like a hermit, I can still *live* in my own home rather than slowly die  
25 from fatigue and heart problems.

26 You know, after all the work I have done so far on this case, I want to go out on Friday and unwind  
27 with some friends. But I can't! Because there is a smart meter on every restaurant in the  
28 area! Don't you people get it! You have forced me, and others, to live like hermits. None of us  
29 wants to live this way! Until a couple months ago, I *didn't* live this way.

30 Lastly, I want to say that I know how to live with pain. I have to get injections in to my joints every  
31 three weeks for my Ehlers-Danlos Syndrome. I have done this with no anesthesia for years.  
32 My doctor has never, ever seen anyone else do it without medication. I can take pain. I can  
33 take hardship. I am not here because I am imagining something. I am not here because of  
34 fear. I am here because my body will not survive a smart or digital meter on my home. I am  
35 here because of the reality of what these meters do to my body.

**PRE-FILED DIRECT TESTIMONY  
OF [REDACTED]  
MPUC Docket No. 2011-00262**

1   **Q.   Please state your name, address and occupation.**

2   **A.   [REDACTED]**  
3   **[REDACTED]**

4   **Q.   Was a CMP smart meter installed at your residence?   If so, state**  
5   **approximately the date when it was installed.**

6   **A.   Yes, February 18th, 2011**

7   **Q.   If a smart meter has not been installed, or if one was installed but removed**  
8   **and replaced by an analog meter at your request, please describe the**  
9   **circumstances of your request or complaint to CMP and their response.**

10   **A.   I am currently in the process of requesting to opt out and have an older version**  
11   **analog meter installed. I called CMP Smart Meter office to request removal, they**  
12   **very nicely indicated they would do so, but they told me I should consider the low**  
13   **RF transmission as short bursts for less than a total of 1 minute in a 24hr period. (I**  
14   **found this hard to believe given the immense amount of scientific data indicating**  
15   **otherwise due to the long term health risks). They referred me to their web site for**  
16   **more detailed information on smart meters. They also advised that if I opted out, a**  
17   **\$40 fee plus \$12.00 monthly fee would be added to the bill each month.**

18   **Q.   Please describe why you do not want a smart meter at your residence.**

19   **A.   My health concerns are based upon both physical and medical conditions that I**  
20   **have. Since the meter has been installed, I have experienced a significant decline**

1 in health.

2 **Q. Do you experience electromagnetic sensitivity symptoms in proximity to radio**  
3 **frequency devices, such as Wi-Fi, microwave ovens, cell phones, cordless**  
4 **phones, smart meters or other devices? Please describe the symptoms and**  
5 **the circumstances when they occur.**

6 A. Yes. I have headaches, fatigue and ringing in the ears if within a few feet of the  
7 smart meter for a duration of time, i.e. sitting in living room where meter is  
8 installed. Sensitivity to all wi-fi devices has developed since the smart meter was  
9 installed. At first in July in 2011, fibromyalgia, weakness and fatigue occurred,  
10 then in October and November 2011 face numbness, tingling occurred, followed  
11 by more advanced to acute reactions of burning of the head and face in April and  
12 May of 2012. The symptoms have continued to increase to headaches, anxiety,  
13 dizziness, nausea, weakness, muscle pain (widespread), joint pain and acute and  
14 sudden face, neck and chest burning along with the headaches when exposed to  
15 EMF conditions. Ringing in ears and aching teeth are more recent symptoms.

16 I am now at a hypersensitive condition and unable to work and make an income.

17 **Q. If you have physical or medical conditions, including sensitivity to**  
18 **electromagnetic radiation, have these conditions been diagnosed? Identify the**  
19 **diagnosis or description of the condition.**

20 A. Yes. I have sought out and located a few doctors knowledgeable in this area. All  
21 have diagnosed me with EMF Hypersensitivity, allergic reactions to  
22 electromagnetic radiation. And have recommended omitting the smart meter and

1 avoidance of wireless devices and EMF sources in the home. I am currently  
2 engaged in a medical treatment protocol for EMF patients.

3 **Q. Has your physician or other medical care provider made any**  
4 **recommendations about exposure to electromagnetic devices, including smart**  
5 **meters?**

6 **A.** Remove smart meter. Avoid and discontinue use of all wireless phones and  
7 devices. Avoid EMF sources in the home as much as possible.

8 **12. Has your experience with smart meters caused any disruptions in your daily**  
9 **living? Please describe the circumstances?**

10 **A.** My life has been profoundly impacted, I cannot work, need to avoid certain areas  
11 of my home, including where the smart meter is installed and the kitchen making  
12 meal preparation difficult. I cannot go to friends' homes with smart meters and  
13 wireless devices. I have to avoid rooms and situations with crowds where many  
14 cell phones may be present.

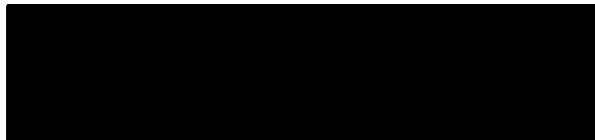
15 I cannot use a cell phone, be within a few feet of others using cell phones, a  
16 computer, cordless phone etc. No wireless routers have been installed at home, nor  
17 do I plan to install one. This has affected my income, my ability to pay for medical  
18 expenses and has created an uncertain future as to if we can remain in our home.

19 **Q. Please tell us anything else that you want us or the Public Utilities**  
20 **Commission to know about your experiences and circumstances.**

21 **A.** The use of smart meters and the harmful exposure to residents needs to be  
22 seriously reconsidered. Peoples' lives are being altered, their health at significant

1 risk. There has been enough research here in the U.S. and the health risks are well  
2 known and documented throughout Europe, to prove this is a problem.

Dated this 31 day of January, 2013.



STATE OF MAINE  
CUMBERLAND, ss:

January 31, 2013

Personally appeared the above-named [REDACTED] and stated under oath that the foregoing Affidavit made by her is true and based upon her own personal knowledge, information or belief, and so far as upon information and belief, she believes the information to be true. Before me,

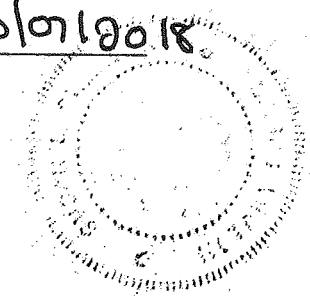
A handwritten signature in cursive script that reads "Susan L. Swanson".

Notary Public/~~Attorney-at-Law~~

Susan L Swanson

Name Typed or Printed

My Commission Expires: 10/07/2018



**PRE-FILED DIRECT TESTIMONY  
OF [REDACTED]  
MPUC Docket No. 2011-00262**

**1Q. Please state your name and address.**

2 A. [REDACTED] (I am a tenant at this  
3 address;

4 [REDACTED] (I lived here for a year as owner  
5 and now am the landlord)

**6Q. Was a CMP smart meter installed at your residence? If so, state  
7 approximately the date when it was installed.**

8 A. I moved to this rental on September 1, 2012. The smart meters were  
9 already installed. The meters are outside by living room, and are linked to my  
10 house and my landlord's house.

**11Q. If a smart meter was removed and replaced by an analog meter at your  
12 request, please describe the circumstances of your request or complaint to  
13 CMP and their response.**

14 A. When I lived in [REDACTED], a smart meter was installed. I did not  
15 immediately notice an impact, but, slowly, over time. I realized I was feeling  
16 dizzy and more tired. I asked that the smart meter be removed. It wasn't clear to  
17 me when the smart meter would be removed. One day I walked into my home and  
18 I knew that was the day that CMP removed the meter. I could immediately feel  
19 more clarity and less restriction. I then went to look at the meter and confirmed  
20 that I was given an analog meter.

1Q. If you do not currently have a smart meter, are you paying the opt-out fees?

2 A. I am paying the opt-out fees at my [REDACTED] property, but I am strongly  
3 opposed to these fees because I had a medical condition (head injury). Why  
4 should I pay for an accommodation?

5Q. Please describe why you do not want a smart meter at your residence.

6 Identify any health concerns you may have about smart meters and whether  
7 these concerns are based upon any specific physical or medical conditions  
8 that you or any of your family members may have.

9 A. I have a diagnosed brain injury and had to retire early because of this  
10 injury. I am very sensitive to EMF's, chemicals and other environmental factors.  
11 I cannot wear hats or sunglasses because they impact my cognitive focus and  
12 endurance. EMF has the same impact. I minimize environmental and chemical  
13 exposure because of my brain injury.

14Q. Do you experience electromagnetic sensitivity symptoms in proximity to radio  
15 frequency devices, such as Wi-Fi, microwave ovens, cell phones, cordless  
16 phones, smart meters or other devices?

17 A. EMF creates cognitive fatigue, dizziness, physical fatigue, and inability to  
18 focus. Smart meters seem to impact my sleep and level of exhaustion more than a  
19 wireless device does. I can't explain why.

20Q. If you have physical or medical conditions, including sensitivity to  
21 electromagnetic radiation, have these conditions been diagnosed? Identify  
22 the diagnosis or description of the condition.



1 A. Cognitive disorder NOS is official psych diagnosis. Toxic encephalitis is  
2 also a diagnosis.

3**Q. Has your physician or other medical care provider made any**  
4**recommendations about exposure to electromagnetic devices, including smart**  
5**meters? Please attach any recommendations in writing from your health care**  
6**provider.**

7 A. I have not sought medical support for this. I know what makes me sick. I  
8 am sure my neuropsychologist will provide a letter if needed.

9**Q. Has your experience with smart meters caused any disruptions in your daily**  
10**living? Please describe the circumstances?**

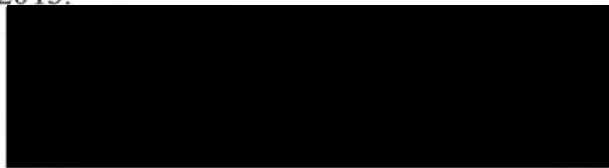
11 A. CMP representatives have been rude, uncaring, and inflexible. They have  
12 been giving the company line and are blaming the PUC.

13**Q. Please tell us anything else that you want us or the Public Utilities**  
14**Commission to know about your experiences and circumstances.**

15 A. The rental house I live in has two smart meters. I want them removed, but I  
16 would have to pay for both to be removed and then I have to pay the monthly opt-  
17 out fee for both meters. Given my medical condition, that I am on a fixed income,  
18 that I have a disability, I find it shameful that CMP is requiring me to pay for all  
19 these extra fees in order for them to make an accommodation. I have gotten into  
20 several discussions with CMP about this. They say this is the PUC's decision. I  
21 argued, unsuccessfully, that CMP had their own authority to waive the opt-out fee.  
22 They would not budge. I argued that for me to pay the extra fees associated with

1 the analog meter is like charging a person in a wheelchair to access a ramp to all  
2 public buildings. Why is it that CMP does not provide accommodations for  
3 people with medical conditions clearly impacted by the smart meters? This is  
4 about discrimination, arrogance and profit and not about what is doing right. I am  
5 living with a known impact, with two smart meters on my house, because I can't  
6 afford to pay all the extra fees. And how much profit is CMP making every year?

Dated this 11 day of January, 2013.



STATE OF MAINE  
CUMBERLAND, ss:

January 11, 2013

Personally appeared the above-named [REDACTED] and stated under oath that the foregoing Affidavit made by him is true and based upon his own personal knowledge, information or belief, and so far as upon information and belief, he believes the information to be true. Before me,

Notary Public/Attorney-at-Law

Michael E. Surry  
Name Typed or Printed

My Commission Expires: 10-02-2018

**PRE-FILED DIRECT TESTIMONY  
OF [REDACTED]  
MPUC Docket No. 2011-00262**

**Q. Please state your name and address:**

**A.** [REDACTED]

**Q. Was a smart meter installed at your home?**

**A.** Yes, four smart meters were supposedly installed in our 4-unit Victorian building sometime in July while we were traveling. We returned home on August 15, 2011, after two months of work and travel in Austria/Europe. We did not become aware of them until September 1, 2011.

**Q. What was the make and model of the meters?**

**A.** Landis+Gyr PG&E Smart Meter, Type: Focus AXR-SD

**Q. At what frequency did the meters transmit?**

**A.** 902-928 MHz ISM Band

**Q. Did you experience any unusual symptoms after the meters were installed?**

**A.** Immediately after our return on August 15, my wife and I started to experience headaches, disturbed sleep, fatigue, and tinnitus - I had a difficult time concentrating at work due to headaches and lack of sleep.

**Q. Had you experienced these symptoms before the meter was installed?**

**A.** I had never experienced these symptoms before in my life. Before August 15, 2011, I was in perfect health with no awareness or knowledge of electro-hypersensitivity (EHS) and/or radio-frequency sickness. We had no idea that electro-magnetic radiation (EMR) was so harmful to health or that Europe and Russia had much stricter regulations on EMR because of their past experience and science based standards. We lived a normal life with use of technology that is befitting of two accomplished professionals at 35 years of age (I have a master's degree in Civil & Environmental Engineering and work as a manager at a large Bay Area firm. My wife, [REDACTED] is a medical doctor). After receiving a

mailing earlier in the year from PG&E, we had put our [REDACTED] apartment on the smart meter delay list because we had heard negative reports (billing errors/privacy issues) from relatives, media and other California citizens with regard to this program, but we were not aware of the health issues.

**Q. Do you believe your symptoms are caused by exposure to the smart meter?**

A. Yes, there is no other explanation. Many physicians, scientists and biologists are increasingly stating that smart meters, the smart grid and wireless communications technology are a serious health concern (See Exhibits A and D). Not only is a growing portion of the population experiencing acute electro-hypersensitivity symptoms, there are hundreds of peer-reviewed studies showing significant long-term effects including cell damage, DNA chain breaks, immune and neurological system impairment, infertility and damage to the blood brain barrier (See Exhibit A-2).

**Q. When did you first associate your symptoms to the meters and why do you believe they are caused by the meter?**

A. I will answer these questions by summarizing the timeline of events as they occurred.

**September 1, 2011:** This was when we realized that smart meters had been installed in our building - a co-located bank of 4 smart meters were installed 10 feet directly below our bedroom. This was the only change to our living environment and our home that we had lived in for five years.

**September 10, 2011:** I spent 1-2 hours painting around the downstairs area in close proximity to where the smart meters were located. We did not realize that the pulsed electro-magnetic radiation emissions from the meters were so high (as we later learned from having them measured and filmed by a professional). There were no warning signs on any of the wireless smart meters. PG&E had stated that the meters only communicate wirelessly for 45 seconds each day. They did not say it was through high-intensity millisecond pulses that the smart meter bank produced every 2 - 8 seconds (essentially pulsing continuously). PG&E later admitted that their wireless smart meters transmit between 10,000 and 190,000 times per day (See Exhibit A-4).

**September 10 - 30, 2011:** The symptoms got considerably worse for both of us. The headaches, heart palpitations/arrhythmia, insomnia, fatigue and extreme tinnitus all increased in intensity. During this time we began to research smart

61 meters and realized that thousands of people across California were having the  
62 exact same symptoms. I also checked with our neighbors and some of them were  
63 having similar symptoms. We had nearly one dozen close friends in the San  
64 Francisco Bay Area who were experiencing the exact same health impacts - all  
65 since smart meters were installed at their homes.

66 Once we realized how dangerous these devices were, we immediately and  
67 repeatedly contacted PG&E to have them removed. They would not listen to us.  
68 They treated us very poorly. They even sent out people to test carbon-monoxide  
69 levels to see if that was the problem and a PG&E representative told one of our  
70 neighbors that pulsed electro-magnetic radiation is actually good for her brain (she  
71 slept 5 feet from the bank of smart meters, was pregnant at the time and quickly  
72 moved back to Sydney, Australia). After over one dozen calls from us, our  
73 neighbors and our landlord, PG&E essentially told us to go away and stopped  
74 returning our calls.

75 **Q. Has your experience with smart meters caused disruptions in your daily**  
76 **living?**

77 A. Yes. Work became difficult to do. Sleep was brought down from eight  
78 hours to three intermittent hours per night. Our marriage became strained because  
79 of the tension we were feeling in our own home. We started to feel hopeless and  
80 depressed - after having an incredibly positive and creative time in Austria and  
81 normally being very positive and productive people. We even put aside two  
82 businesses that we had started over the summer because of our health condition. It  
83 was as though a switch had been flipped. (A recent study explains the mechanism  
84 for this - see Exhibit E).

85 The symptoms got progressively worse. We gave notice on our apartment where  
86 we had lived for 5 years and had rent control (a substantial benefit in a booming  
87 [REDACTED] rental market where a comparable flat had almost doubled in price).  
88 We simply could not live in our home without experiencing debilitating health  
89 effects. Our safety was at stake both in our home and while driving – [REDACTED]  
90 noted that her memory and concentration while driving was not nearly what it had  
91 been two months prior and had deteriorated to the point where she did not feel  
92 safe. The effects of the smart meters were getting worse, so we started to look for  
93 a place outside of San Francisco. We looked in Mill Valley, CA and found a  
94 home near downtown. However, they had a smart meter and I realized for the first  
95 time that I got headaches when near a cell phone tower (there is one in downtown  
96 Mill Valley – just one block from the home). I had now become electro-  
97 hypersensitive and could not be near wireless communication equipment (Cell  
98 towers, smart phones, Wi-Fi and SmartMeters<sup>TM</sup>). We realized that we had to

99 move to Fairfax, CA because it was one of the only communities without smart  
100 meters in our area. This was a burden, however, because it is over 2 hours by car  
101 from my place of employment in Silicon Valley. We had no choice as we had to  
102 give our bodies a chance to recover. Again, we were completely healthy just 2  
103 months prior and the only new thing in our lives was the co-located bank of smart  
104 meters 10 feet from our bed.

105 From October 15 until November 22, 2011, we sublet a home in Fairfax. We had  
106 to keep our [REDACTED] apartment because we realized that finding a new rental  
107 in this market would take a long time (typically 3-4 months). We paid for two  
108 places at one time. While living in Fairfax our symptoms eased. We could sleep  
109 again. The heart palpitations decreased and the tension/anxiety/fatigue went away.  
110 However, the headaches continued. Any time I went downtown to Fairfax, the  
111 cell tower and wi-fi exacerbated the headaches. Every time I went into San  
112 Francisco or drove near a cell phone tower, the headaches would worsen. Using a  
113 cell phone became nearly impossible. I could only text, and sparingly at that. I  
114 would later meet other people experiencing the exact same phenomenon.

115 We experienced considerable stress while in Fairfax as well. We had essentially  
116 been uprooted by PG&E's smart meter program and were forced to seek refuge in  
117 a town that was not our home. In addition, it was very hard to find housing.  
118 Because of the housing/financial crisis, there are many more renters than there are  
119 places available. We did not know where we would live next. We were smart  
120 meter refugees. We met others who were also moving to Fairfax because they too  
121 were having health effects that they had attributed to smart meter installations.

122 Without a new place to live in Fairfax and our sublet ending, we were again under  
123 considerable stress. We tried to go back to our [REDACTED] home, but after only  
124 15 minutes there our symptoms would reoccur. [REDACTED] would sit in the kitchen  
125 and watch her pulse go from 60 to 120 beats per minute spontaneously, which is a  
126 common symptom of electro-hypersensitivity (See Exhibit C-3). We could not  
127 even consider spending one night in our home. We had no idea where we would  
128 go next. Luckily, the day we had to leave Fairfax, a friend from San Francisco  
129 offered to sublet his home for a month while he traveled. He had a smart meter,  
130 but it was on the other side of the home. We could sleep at this home, but being  
131 back in San Francisco was not easy. Our electro-hypersensitivity (EHS) symptoms  
132 were worse in San Francisco. We learned that we had to unplug all Wi-Fi and  
133 cordless phones and we had to keep any cell phones around us on "airplane" mode  
134 or off. We felt like refugees and did not know where we would live next. We  
135 really felt hopeless as PG&E was not admitting that there was a problem. We also  
136 realized through research that thousands (possibly tens of thousands) of people  
137 throughout California were experiencing the exact same thing. Some were living  
138 in their cars in nature to seek relief. Many had abandoned their homes and careers

and now live off-the-grid in places like Big Sur or other states. Others had left the country. Lives were being destroyed and no help was on the way.

**Q. Have you sought medical attention for your symptoms?**

A. Between October 15 and November 22, 2011, we began to seek considerable health treatments. [REDACTED] is already a medical doctor and holistic physician. However, we needed the help of others and sought various therapies to help reduce our electro-hypersensitivity. We spent thousands of dollars during this month on alternative therapies because allopathic medicine does not know how to treat this condition, other than medicating the symptoms away, which actually makes things worse over time. These therapies provided some relief, but it was never long-lasting. We did feel like we were getting stronger while living in Fairfax. It seems the only known way to reduce electro-hypersensitivity once it occurs is avoidance of all wireless technology and high electrical fields. This is increasingly difficult in our world – especially now that utility companies want to put smart meters in every community in the state.

We contacted our Kaiser Permanente physician about our condition. He had heard from other Kaiser doctors that other patients were experiencing the same thing since smart meters were installed. He provided a letter for each of us to give to PG&E and the CPUC to have the smart meter bank removed from our building (Exhibit B).

**Q. Did PG&E eventually remove the smart meter?**

A. When we ran out of safe places to stay, we sent a package to the top executives at PG&E and each of the CPUC Commissioners demanding that they take the bank of smart meters out of our building within five days or we would hire a certified electrician to do this for us. Within 48 hours of the executives receiving this package, the smart meters were out of our building and safe analog meters were installed. The PG&E customer relations manager that called, Mark Torez, was very cordial and helpful. He called six or seven times within 24 hours of our initial conversation. I wondered why someone had not contacted us months prior when we contacted PG&E so many times about our issues with the smart meters. Mark and his superiors authorized the installation of the safe analog meters at our building, but would not admit that people were getting sick because of the smart meters (for obvious liability reasons). He stated that people go through phases in life and that apparently my wife and I were going through our “electro-sensitivity phase”. The next day the smart meters came out.

174 **Q. Did your symptoms subside after the meter was removed?**

175 A. The effect of having the smart meters taken out was noticeable almost  
176 immediately. The home felt completely different. For the first time in 3 months,  
177 we were able to live and sleep in our own home. With the bank of four smart  
178 meters directly below our bedroom, this was not possible. Our tinnitus decreased  
179 somewhat and the heart palpitations/arrhythmia were not as frequent. The nervous  
180 system overload that we had been experiencing slowly started to diminish.

181 The damage had been done however. I am now electro-hypersensitive; a  
182 condition that I did not even know existed a few months prior (See Exhibits C and  
183 D-4).

184 **Q. What are your current circumstances?**

185 A. The electro-hypersensitivity issues persist. Being around wireless  
186 communications technology brings about headaches, fatigue and a lack of  
187 concentration and memory. I experience a tremendous pressure in my head that is  
188 very painful. It takes hours, sometimes days, for this head tension to decrease  
189 after I am exposed to wireless communication technology, strong electro-magnetic  
190 fields or a home or neighborhood with dirty electricity. Being sensitive to dirty  
191 electricity is a huge problem, as experts have shown it has increased on the power  
192 grid and on the wiring of homes with the deployment of smart meter/smart grid  
193 technology. We now use electricity sparingly in our apartment because it causes  
194 headaches. We only run our refrigerator when we are not at home and have to  
195 turn off the circuit breakers to our home at night.

196 My wife has moved back to Europe for now as she just did not feel well here. Her  
197 symptoms have reduced since leaving California, but moving has forced her to  
198 give up her practice in the Bay Area. My own condition has worsened. It is  
199 difficult for me to be in urban environments, in a normal office environment or  
200 even on certain computers because of the electro-hypersensitivity (wireless  
201 devices and computers are now very difficult to be around, which was not the case  
202 just one year ago). I have persistent headaches that only diminish when I am away  
203 from wireless technology and other electro-magnetic fields. This will likely affect  
204 my ability to earn income, the places that I can live and may completely change  
205 my life, as it has for many other affected people. I question whether these costs  
206 are factored into any smart meter program.

207 When I spend time in nature, away from all wireless communications equipment  
208 and electro-magnetic fields, my EHS symptoms, including headaches, completely  
209 disappear within 24-48 hours. However, they reappear almost immediately once I  
210 return to a populated area. I have also inadvertently done dozens of experiments



211 of my own where I would feel a microwave radiation source before seeing it. My  
212 personal experience, along with similar testimonials of many other affected people  
213 and a growing body of scientific evidence of biological harm from non-thermal  
214 microwave radiation is how I know that we are harming people with smart meter/  
215 smart grid technology. The past 12 months have been extremely difficult for my  
216 wife and I. We have spent periods of time at approximately 15 different locations  
217 the past year, mostly searching for safe places to live. This has been very  
218 disruptive to our lives. We are currently living on separate continents, but are  
219 searching for a safe place to be together where we can both live and work.

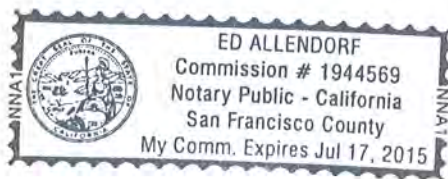
220 I will add that it has been a considerable stress to us the past few months with  
221 regard to the opt-out process and fees. We have been in contact with our  
222 neighbors and the owner of our building. None of the residents are able to afford  
223 the opt-out fees (\$75 plus \$10/month), even though they are all supportive of not  
224 having smart meters in our building.

Dated this 3<sup>rd</sup> day of November, 2012

STATE OF CALIFORNIA  
SAN FRANCISCO, ss:

November 3, 2012

Personally appeared the above-named [REDACTED], and stated under oath that the foregoing Affidavit made by him is true and based upon his own personal knowledge, information or belief, and so far as upon information and belief, he believes the information to be true. Before me,



Ed Allendorf  
Notary Public/~~Attorney-at-Law~~  
Ed Allendorf  
Name Typed or Printed  
My Commission Expires: July 17, 2015



EXHIBIT A

STATEMENT FROM 52 PHYSICIANS AND SCIENTISTS  
CORRECTING MISINFORMATION RELATED TO  
SMARTMETER™ PROGRAM

# Smart Meters: Correcting the Gross Misinformation

[ 11 juin 2012 ]

<http://maisonsaine.ca/smart-meters-correcting-the-gross-misinformation/>

**Quebec-based magazine *La Maison du 21e siecle* asked physician David O. Carpenter, former founding dean of the University at Albany (NY)'s School of Public Health, to comment an open letter published in the Montreal daily *Le Devoir* last May 24. This letter claimed wireless smart meters pose no risk to public health. More than fifty international experts contributed to the following rebuttal.**

We, the undersigned are a group of scientists and health professionals who together have coauthored hundreds of peer-reviewed studies on the health effects of electromagnetic fields (EMFs). We wish to correct some of the gross misinformation found in the letter regarding wireless "smart" meters that was published in the Montreal daily *Le Devoir* on May 24. Submitted by a group Quebec engineers, physicists and chemists, the letter in question reflects an obvious lack of understanding of the science behind the health impacts of the radiofrequency (RF)/microwave EMFs emitted by these meters.

The statement that « Thousands of studies, both epidemiological and experimental in humans, show no increase in cancer cases as a result of exposure to radio waves of low intensity... » is false (1). In fact, only a few such studies — two dozen case-control studies of mobile phone use, certainly not thousands, have reported no elevations of cancer, and most were funded by the wireless industry. In addition, these reassuring studies contained significant experimental design flaws, mainly the fact that the populations followed were too small and were followed for a too short period of time.

Non industry-funded studies have clearly demonstrated a significant increase in cancer cases among individuals who have suffered from prolonged exposure to low-level microwaves, transmitted notably by radio antennas. The effects were best documented in meta-analyses that have been published and that include grouped results from several different studies: these analyses consistently showed an increased risk of brain cancer among regular users of a cell phone who have been exposed to microwaves for at least ten years.

## **Brain Cancer Rates**

Furthermore, the argument that brain cancer rates do not indicate an overall increase in incidence is not evidence that cell phones are safe: the latency for brain cancer in adults after environmental exposure can be long, up to 20-30 years. Most North Americans haven't used cell phones extensively for that long. The evidence of the link between long-term cell phone use and brain cancer comes primarily from Northern Europe, where cell phones have been commonly used since the 1990s. Nevertheless, the most recent collection of primary brain tumors mined from pathology units in Australia showed brain cancer incidence rose by about 35% between 2000 and 2008 in the Australian Capital Territory and New South Wales (total population : more than 7 million).

Children are especially at risk. In May 2012, the U.K.'s Office of National Statistics reported a 50 percent increase in incidence of frontal and temporal lobe tumors in children between 1999 and 2009. This statistic is especially disturbing since in May 2011, after reviewing the published scientific literature regarding cancers affecting cell phone users, the International Agency for

Research on Cancer (IARC) classified radiofrequency radiation as a 2B, possible human carcinogen. Despite the absence of scientific consensus, the evidence is sufficiently compelling for any cautious parent to want to reduce their loved one's exposure to RF/microwave emissions as much as possible, as recommended by various countries such as Austria, Belgium, Germany, Russia and the United Kingdom.

### **Electrosensitivity**

Public fears about wireless smart meters are well-founded. They are backed by various medical authorities such as those of the Santa Cruz County (California) Public Health Department. These authorities are worried about the growing number of citizens who say they have developed electrohypersensitivity (EHS), especially since for many of them, the symptoms developed after the installation of such meters (it takes some time for most people to link the two events).

Since the turn of the millennium, people are increasingly affected by ambient microwaves due to the growing popularity of wireless devices such as cell phones and Wi-Fi Internet. Therefore, the mass deployment of smart grids could expose large chunks of the general population to alarming risk scenarios without their consent. According to seven surveys done in six European countries between 2002 and 2004, about 10% of Europeans have become electrosensitive. The most famous person to publicly reveal her electrosensitivity is Gro Harlem Brundtland, formerly Prime Minister of Norway and retired Director of the World Health Organization (WHO).

While there is no consensus on the origins and mechanisms of EHS, many physicians and other specialists around the world have become aware that EHS symptoms (neurological dermatological, acoustical, etc.) seem to be triggered by exposure to EMF levels well below current international exposure limits, which are established solely on short-term thermal effects (2). Organizations such as the Austrian Medical Association and the American Academy of Environmental Medicine have recognized that the ideal way to treat of EHS is to reduce EMF exposure.

Therefore, caution is warranted because the growing variety of RF/microwave emissions produced by many wireless devices such as smart meters have never been tested for their potential biological effects.

### **Well-known bioeffects**

While the specific pathways to cancer are not fully understood, it is scientifically unacceptable to deny the weight of the evidence regarding the increase in cancer cases in humans that are exposed to high levels of RF/microwave radiation.

The statement that « there is no established mechanism by which a radio wave could induce an adverse effect on human tissue other than by heating » is incorrect, and reflects a lack of awareness and understanding of the scientific literature on the subject. In fact, more than a thousand studies done on low intensity, high frequency, non-ionizing radiation, going back at least fifty years, show that some biological mechanisms of effect do not involve heat. This radiation sends signals to living tissue that stimulate biochemical changes, which can generate various symptoms and may lead to diseases such as cancer.

Even though RF/microwaves don't have the energy to directly break chemical bonds, unlike ionizing radiation such as X-rays, there is scientific evidence that this energy can cause DNA damage indirectly leading to cancer by a combination of biological effects. Recent publications have documented the generation of free radicals, increased permeability of the blood brain barrier allowing potentially toxic chemicals to enter the brain, induction of genes, as well as altered electrical and metabolic activity in human brains upon application of cell phone RF/microwaves similar to those produced by smart meters.

These effects are cumulative and depend on many factors including RF/microwave levels, frequency, waveform, exposure time, biovariability between individuals and combination with other toxic agents. Clear evidence that these microwaves are indeed bioactive has been shown by the fact that low-intensity EMFs have proven clinically useful in some circumstances. Pulsed EMFs have long been used to successfully treat bone fractures that are resistant to other forms of therapy. More recently, frequency-specific, amplitude-modulated EMFs have been found useful to treat advanced carcinoma and chronic pain.

High frequency EMFs such as the microwaves used in cell phones, smart meters, Wi-Fi and cordless "DECT" phones, appear to be the most damaging when used commonly. Most of their biological effects, including symptoms of electrohypersensitivity, can be seen in the damage done to cellular membranes by the loss of structurally-important calcium ions. Prolonged exposure to these high frequencies may eventually lead to cellular malfunction and death.

Furthermore, malfunction of the parathyroid gland, located in the neck just inches from where one holds a cell phone, may actually cause electrohypersensitivity in some people by reducing the background level of calcium ions in the blood. RF/microwave radiation is also known to decrease the production of melatonin, which protects against cancer, and to promote the growth of existing cancer cells.

#### **Early warning scientists attacked**

In recommending that the Precautionary Principle be applied in EMF matters, the European Environment Agency's Director Jacqueline McGlade wrote in 2009: "We have noted from previous health hazard histories such as that of lead in petrol, and methyl mercury, that 'early warning' scientists frequently suffer from discrimination, from loss of research funds, and from unduly personal attacks on their scientific integrity. It would be surprising if this is not already a feature of the present EMF controversy... » Such unfortunate consequences have indeed occurred.

The statement in the *Le Devoir* letter that « if we consider that a debate should take place, it should focus exclusively on the effects of cell phones on health » is basically an acknowledgement that there is at least some reason to be concerned about cell phones. However, while the immediate exposure from a cell phone is of much greater intensity than the exposure from smart meters, cell phone use is temporary.

#### **Smart meters**

As Australian Associate Professor of neurosurgery Vini G. Khurana reports, adverse neurological effects have been reported in people who sustain close proximity to wireless meters, especially under 10 feet (3 metres).

A wireless smart meter produces radiofrequency microwave radiation with two antennas in approximately the same frequency range (900 MHz to 2.4 GHz) as a typical cell tower. But, depending on how close it is to occupied space within a home, a smart meter can cause much higher RF exposures than cell towers commonly do. If a smart meter is located on a common wall with a bedroom or kitchen rather than a garage wall, for example, the RF exposure can be the same as being within 200 to 600 feet distance of a cell tower with multiple carriers. With both cell towers and smart meters, the entire body is immersed by microwaves that go out in all directions, which increases the risk of overexposure to many sensitive organs such as the eyes and testicles. With a cell phone, people are exposed to microwaves primarily in the head and neck (unless using speaker mode), and only when they use their device.

Wireless smart meters typically produce atypical, relatively potent and very short pulsed RF/microwaves whose biological effects have never been fully tested. They emit these

millisecond-long RF bursts on average 9,600 times a day with a maximum of 190,000 daily transmissions and a peak level emission two and a half times higher than the stated safety signal, as the California utility Pacific Gas & Electric recognized before that State's Public Utilities Commission. Thus people in proximity to a smart meter are at risk of significantly greater aggregate of RF/microwave exposure than with a cell phone, not to mention the cumulative exposure received by people living near multiple meters mounted together, pole-mounted routers or utility collector meters using a third antenna to relay RF signals from 500 to 5,000 homes.

A technical study performed by Sage Associates in California indicates that RF levels from various scenarios depicting normal smart meter installation and operation may violate even the out-of-date US public safety standards which only consider acute thermal effects. This can happen when a person stands close to the meter to read the power consumption, or touches it, or shades the meter face with a hand to better read it. Emissions are also increased by reflective materials, such as stainless steel, other metals and mirrors, which can re-radiate stronger than the otherwise unaltered background. Microwaves are absorbed and dissipated by partially conductive materials, such as cement and special RF shielding paints and fabrics.

In addition to the erratic bursts of modulated microwaves emitted by wireless smart meters transferring usage data to electric, gas and water utilities, wireless as well as wired smart (powerline communication) meters are also a major source of "dirty electricity" (electrical interference of high frequency voltage transients typically of kilohertz frequencies). Some scientists, such as American epidemiologist Sam Milham, believe that many of the health complaints about smart meters may also be caused by dirty electricity generated by the « switching » power supply activating all smart meters. Since the installation of filters to reduce dirty electricity circulating on house wiring has been found to relieve symptoms of EHS in some people, this method should be considered among the priorities aimed at reducing potential adverse impacts. Indeed, the Salzburg State (Austria) Public Health Department confirms its concern about the potential public health risk when in coming years almost every electric wire and device will emit such transient electric fields in the kilohertz-range due to wired smart meters.

#### **Rather be safe than sorry**

The apparent adverse health effects noted with smart meter exposure are likely to be further exacerbated if smart appliances that use wireless communications become the norm and further increase unwarranted exposure.

To date, there have been few independent studies of the health effects of such sources of more continuous but lower intensity microwaves. However, we know after decades of studies of hazardous chemical substances, that chronic exposure to low concentrations of microwaves can cause equal or even greater harm than an acute exposure to high concentrations of the same microwaves.

This is why so many scientists and medical experts urgently recommend that measures following the Precautionary Principle be applied immediately — such as using wired meters — to reduce biologically inappropriate microwave exposure. We are not advocating the abolishment of RF technologies, only the use of common sense and the development and implementation of best practices in using these technologies in order to reduce exposure and risk of health hazards.

- David O. Carpenter, MD, Director, Institute for Health & the Environment, University at Albany, USA
- Franz Adlkofer, M.D., Chairman of the Pandora Foundation, Coordinator of the European Reflex Report on DNA-damage by cellphone radiation, Neuendorf, Germany
- M. S. H. Al Salameh, PhD, Professor of Electrical Engineering, University of Science & Technology, Irbid, Jordan
- Jennifer Armstrong, MD, Past President, American Society for Environmental Medicine, Founder, Ottawa Environmental Health Clinic, Ontario, Canada
- Pierre L. Auger, MD, Occupational medicine, Multiclinique des accidentés 1464, Montreal, Quebec, Canada
- Igor Beliaev, PhD, Head research scientist, Cancer Research Institute, Slovak Academy of Sciences, Bratislava, Slovak republic
- Fiorella Belpoggi, PhD, Director Cesare Maltoni Cancer Research Center, Ramazzini Institute, Bologna, Italy
- Dominique Belpomme, MD, Director of the European Cancer and Environment Research Institute, Brussels, Belgium
- Martin Blank, PhD, former President, Bioelectromagnetics Society, Special Lecturer, Department of Physiology and Cellular Biophysics, Columbia University Medical Center, New York, USA
- Barry Breger, MD, Centre d'intégration somatosopique (orthomolecular medicine), Montreal, Quebec
- Simona Carrubba, PhD, Prof. Biophysics, Daemen College, Amherst, NY, Associate Researcher, Neurology, Buffalo General Hospital, Buffalo, NY
- John Cline, MD, Professor, Institute for Functional Medicine, Federal Way, WA, USA, Medical Director, Cline Medical Centre, Nanaimo, BC, Canada
- Alvaro Augusto de Salles, PhD, Professor of Electrical Engineering, Federal University of Rio Grande do Sul, Porto Alegre, Brazil
- Christos Georgiou, Prof. Biochemistry, Biology Department, University of Patras, Greece
- Andrew Goldsworthy, PhD, Honorary lecturer in Biology, Imperial College, London, UK
- Claudio Gómez-Perretta, MD, Director, Centro de Investigación, Hospital Universitario LA Fe, Valencia, Spain
- Livio Giuliani, PhD, Senior Researcher, National Insurance Institute (INAIL), Chief of Radiation and Ultrasounds Research Unit, Rome, Italy
- Yury Grigoriev, PhD, Chair Russian National Committee on Non-Ionizing Radiation Protection, Moscow, Russia
- Settimio Grimaldi, PhD, Director, Institute of Translational Pharmacology (Neurobiology and molecular medicine), National Research Council, Rome, Italy
- Magda Havas, PhD, Centre for Health Studies, Trent University, Canada
- Lennart Hardell, MD, Professor of Oncology, University Hospital, Örebro, Sweden
- Denis L. Henshaw, PhD, Professor of Physics, Head of The Human Radiation Effects Group, University of Bristol, UK
- Ronald B. Herberman, MD, Chairman of Board, Environmental Health Trust, and Founding Director emeritus, University of Pittsburgh Cancer Institute, USA
- Donald Hillman, PhD, Dairy Science, Professor Emeritus, Department of Animal Science, Michigan State University, USA
- Isaac Jamieson, PhD, Environmental Science (electromagnetic phenomena in the built environment), independent architect, scientist and environmental consultant, Hertfordshire, UK
- Olle Johansson, PhD, Professor of Neuroscience (Experimental Dermatology Unit), Karolinska Institute, Stockholm, Sweden
- Yury Kronn, PhD, Soviet authority on physics of nonlinear vibrations and high frequency electromagnetic vibrations, founder of Energy Tools International, Oregon, USA

- Vini G. Khurana, MBBS, Associate of Professor of Neurosurgery, Australian National University, Australia
- Henry Lai, PhD, Professor of Bioengineering, University of Washington School of Medicine, Seattle, WA, USA
- Abraham R. Liboff, PhD, Professor Emeritus, Department of Physics, Oakland University, Rochester, Michigan, USA
- Don Maisch, PhD, Researcher on radiation exposure standards for telecommunications frequency, EMFacts Consultancy, Tasmania, Australia
- Erica Mallery-Blythe, MD, Emergency Medicine Physician, England
- Andrew A. Marino, MD, Professor of Neurology, LSU Health Sciences Center, Shreveport, LA, USA
- Karl Maret, MD, President, Dove Health Alliance, Aptos, CA, USA
- Fiorenzo Marinelli, PhD, Researcher on biological effects of EMFs, Institute of Molecular Genetics, National Research Council, Bologna, Italy
- Andrew Michrowski, PhD, Director, Planetary Association for Clean Energy, Ottawa, Canada
- Sam Milham, MD, former chief epidemiologist, Washington State Department of Health, USA
- Joel M. Moskowitz, PhD, Director, Center for Family and Community Health, School of Public Health, University of California, Berkeley
- Gerd Oberfeld, MD, Public Health Department, Salzburg State Government, Austria
- Mike O'Carroll, PhD, Professor Emeritus (Applied Mathematics), University of Sunderland, UK
- Jerry L. Phillips, PhD, Director, Center for Excellence in Science, Department of Chemistry and Biochemistry, University of Colorado, USA
- John Podd, PhD, Professor of Psychology (experimental neuropsychology), Massey University, New-Zeland
- William J. Rea, MD, thoracic and cardiovascular surgeon, founder of the Environmental Health Center, Dallas, Tx, USA
- Elihu D. Richter, MD, Professor, Hebrew University-Hadassah School of Public Health and Community Medicine, Jerusalem, Israel
- Leif G. Salford, MD, Senior Professor of Neurosurgery, Lund University, Sweden
- Nesrin Seyhan, MD, Founder and Chair of Biophysics, Medical Faculty of Gazi University, Turkey
- Cyril W. Smith, PhD, lead author of "Electromagnetic Man", retired from Electronic and Electrical Engineering, University of Salford, UK
- Morando Soffritti, MD, Scientific Director of the European Foundation for Oncology and Environmental Sciences "B. Ramazzini" in Bologna, Italy
- Carlos Sosa, MD, surgeon affected by the Microwave syndrome, Medellin, Columbia
- Antoinette "Toni" Stein, PhD, Collaborative on Health and the Environment (CHE-EMF Working Group), Co-Coordinator, Berkeley, CA, USA
- Stanislaw Szmigielski, MD, PhD Professor of Pathophysiology, Consulting Expert, former director of Microwave Safety, Military Institute of Hygiene and Epidemiology, Warsaw, Poland
- Lauraine Vivian, PhD, Senior Lecturer, Primary Health Care Directorate, Faculty of Health Sciences, University of Cape Town, South Africa.
- Bradford S. Weeks, MD, Director, The Weeks Clinic, Clinton, WA, USA
- Stelios A. Zinelis, MD, Vice-President, Hellenic Cancer Society, Cefallonia, Greece





## EXHIBIT B

### LETTERS FROM PHYSICIANS

[REDACTED]

---

November 27, 2011

[REDACTED]

Dear Pacific Gas & Electric Company and California Public Utilities Commission:

My patient, [REDACTED], began suffering symptoms shortly after the installation of the wireless transmitting smart meters at his [REDACTED] residence.

The symptoms include headaches, insomnia, heart palpitations, tinnitus and an inability to concentrate fully. Prior to the installation of the wireless smart meters, [REDACTED] was a perfectly healthy 35-year-old individual. Over the past several months, his quality of life has deteriorated significantly and he reports that the only way to reduce his symptoms is to seek temporary residence in communities that have not implemented the smart meter technology. This has put considerable stress on [REDACTED] and his wife as they may be forced from their home, community and places of employment.

As the symptoms occurred soon after [REDACTED] was exposed to two banks of smart meters (approximately 10 devices) that are within 15 feet of his bedroom and the fact that many other California citizens are reporting similar conditions after the installation of their smart meters, I am of the opinion that smart meter technology cannot be ruled out as a potential cause for [REDACTED]'s health.

Because of this, if possible, I do not think it is unreasonable to honor this patient's request to remove the above mentioned smart meters and replace them with the non-transmitting analog meters to see if the patient symptomatically feels better.

Sincerely,

[REDACTED]  
MD

[REDACTED]

April 24, 2012

[REDACTED]

Dear Pacific Gas & Electric Company,

My patient, [REDACTED], has been complaining of electro-hypersensitivity symptoms since last September. The symptoms include headaches, trouble sleeping, heart palpitations, tinnitus and an inability to focus. He reports that the symptoms occurred shortly after the bank of smart meters were installed 10 feet from his bedroom in his San Francisco apartment building.

It is my understanding the smart meters were taken out of the building in January. Shortly after the meters were taken out, [REDACTED] and his wife were able to move back into their home and his symptoms began to subside. There was a noticeable reduction in headaches and he was again able to sleep adequately.

During the past three months [REDACTED] has had to spend time in different South Bay homes for work reasons. Each of these homes had smart meters and in all of the cases where the meter was located in the vicinity of his sleeping room, the headaches, tinnitus and sleep disturbances reoccurred. [REDACTED] reports that he has now become sensitive to wireless communication technology and can no longer use a cell phone, be near cell towers or use computer equipment that operate using wi-fi without getting a headache. Prior to September, 2011 he was able to use all of these technologies with no symptoms.

As my patient appears to be part of the 3-5% of Californians who have become sensitive to wireless technologies and the dirty electricity they create, I recommend that no smart meters be installed at his home. The analog meters are the safest technology for my patient.

Sincerely,

[REDACTED] MD

[REDACTED]

October 16<sup>th</sup>, 2012

To Whom It May Concern,

My patient [REDACTED] D.O.B. [REDACTED] has Electromagnetic Hypersensitivity also known as EMF sensitivity. This causes him to get a headache and/or difficulties concentrating and heart palpitations when exposed to electromagnetic radiation. Approximately 3% of the population of California has this illness now and the numbers are rising quickly. In Sweden this is now considered a disability.

I am writing to you today to request that you make some reasonable accommodations for [REDACTED] so that he may continue to work in his office setting without discomfort. These accommodations are:

1. [REDACTED] should not sit under fluorescent lights.
2. His work cubicle should be located as far away from the wire-less router as possible.
3. Computers should be modified to limit radiation exposure to decrease the frequency and severity of his symptoms.
4. A wired phone rather than a cordless phone should be used.
5. Exposure to Smart Meters should be avoided.

For more information please see the website "Citizens for Safe Technology"

Sincerely, [REDACTED]



## EXHIBIT C

### EVIDENCE FOR ELECTRO-HYPERSENSITIVITY

## **Electromagnetic hypersensitivity: evidence for a novel neurological syndrome.**

McCarty DE, Carrubba S, Chesson AL, Frilot C, Gonzalez-Toledo E, Marino AA.

Department of Neurology, LSU Health Sciences Center, Shreveport, Louisiana 71130-3932. USA.

### **Abstract**

**OBJECTIVE:** We sought direct evidence that acute exposure to environmental-strength electromagnetic fields (EMFs) could induce somatic reactions (EMF hypersensitivity).

**METHODS:** The subject, a female physician self-diagnosed with EMF hypersensitivity, was exposed to an average (over the head) 60-Hz electric field of 300 V/m (comparable with typical environmental-strength EMFs) during controlled provocation and behavioral studies.

**RESULTS:** In a double-blinded EMF provocation procedure specifically designed to minimize unintentional sensory cues, the subject developed temporal pain, headache, muscle twitching, and skipped heartbeats within 100 s after initiation of EMF exposure ( $p < .05$ ). The symptoms were caused primarily by field transitions (off-on, on-off) rather than the presence of the field, as assessed by comparing the frequency and severity of the effects of pulsed and continuous fields in relation to sham exposure. The subject had no conscious perception of the field as judged by her inability to report its presence more often than in the sham control.

**DISCUSSION:** The subject demonstrated statistically reliable somatic reactions in response to exposure to subliminal EMFs under conditions that reasonably excluded a causative role for psychological processes.

**CONCLUSION:** EMF hypersensitivity can occur as a bona fide environmentally inducible neurological syndrome.

# **Radiation from Cordless Phones Causes Heart Irregularities, According to New Research Published Today in the European Journal of Oncology**

October 23, 2010. Boulder, CO. Cordless phones, which transmit a similar pulsed signal as Wi-Fi networks at 2.4 Gigahertz, have been shown to impact heart rate in new research published today in the *European Journal of Oncology*.

## **READ ABSTRACT**

The double-blind, peer reviewed study validates the condition complained of by increasing numbers of people across the globe today called 'electrosensitivity', demonstrating immediate effects on heart rate, almost doubling the heart rate in some cases. The study, "Provocation Study using Heart Rate Variability Shows Radiation from 2.4 GHz Cordless Phone Affects Autonomic Nervous System" (Eur. J. Oncol. Library, vol. 5) was led by Prof. Magda Havas, PhD of the Environmental & Resources Studies Department at Trent University, Canada. Co-investigators included Jeffrey Marrongelle, Bernard Pollner, Elizabeth Kelley, Camilla R.G. Rees and Lisa Tully.

Patients today experiencing electrohypersensitivity symptoms are commonly put on drugs for other conditions with similar symptoms, instead of being taught how to create an electromagnetically clean environment to eliminate symptoms.

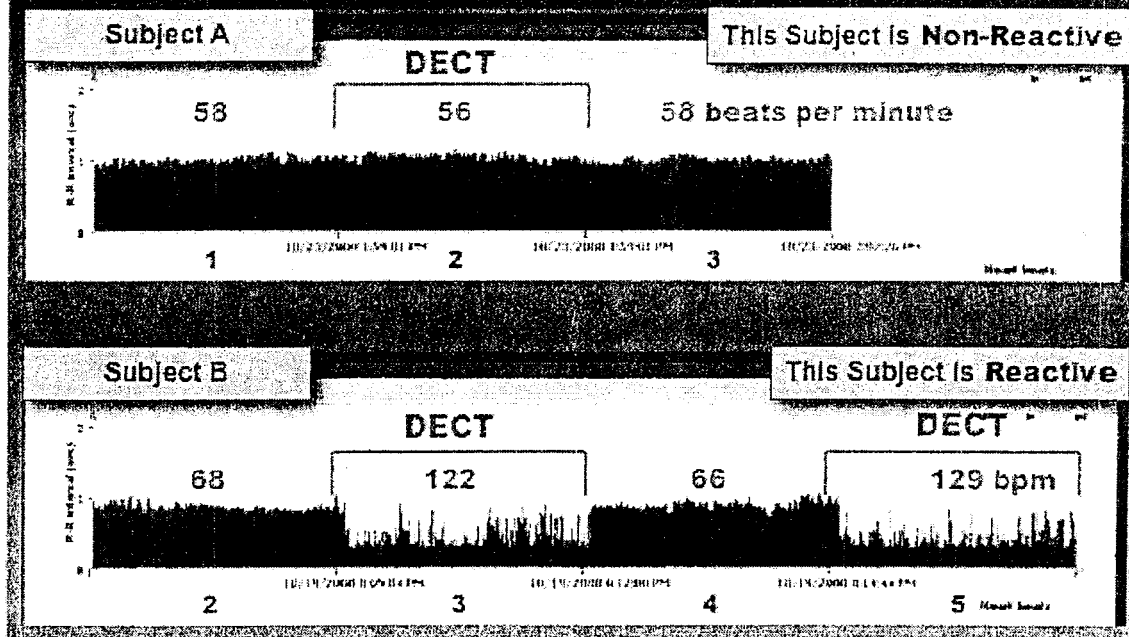
Havas' new study adds to the growing interest in the health effects of cell phones, which also transmit microwave radiation, broadening the focus beyond cell phones' association with brain tumors to their potential effect on other systems, including the heart. It also raises serious concern about risks of exposing schoolchildren to Wi-Fi networks, providing a possible explanation for why some children in schools with Wi-Fi are being diagnosed with, and medicated for, heart irregularities that they believe may linked to Wi-Fi. (See CBS News Coverage on Dangers of Wi-Fi in School and Canadian Global TV Coverage of Dangers of Wi-Fi in School)

"What we found is what many people have said for a long time about devices that emit microwaves," stated Dr. Havas. "People don't just feel ill, their heart begins to race and this is measurable with medical heart monitoring devices."

## **AUDIO INTERVIEW WITH DR. HAVAS**

In the image below, from the study *"Provocation Study using Heart Rate Variability Shows Radiation from 2.4 GHz Cordless Phone Affects Autonomic Nervous System"* by Havas et al, Subject B experienced an increase in heart rate on exposure to a nearby portable phone. The heart rate immediately returned to the baseline after the cordless phone was unplugged.

## Real Time Monitoring of Heart Beat with subjects exposed to a cordless DECT phone



[Download Image Here](#)

Havas' study in the *European Journal of Oncology* on heart rate variability was blinded, which means that the volunteers did not know when the phone was on or off. Forty percent (40%) of subjects had a moderate to severe reaction only when the phone's base station was on, and emitting microwaves. Those who responded experienced arrhythmia (irregular beats of the heart) and/or tachycardia (rapid heart rate). The symptoms were often accompanied by feelings of pain or pressure in the chest and anxiety that would appear and disappeared for no apparent reason.

This is the first study documenting immediate and dramatic changes in heart rate associated with microwave radiation exposure at levels of exposure well below (0.5%) federal guidelines in Canada and the United States (1000 microW/cm<sup>2</sup>). It points to the extraordinary inadequacy of current exposure guidelines to protect the public's health.

Havas states, "While not everyone who is electrically sensitive responds in this manner, those who do will have difficulty being in environments where microwave radiation is present, which is virtually everywhere in our modern, wireless culture." She adds, "Cordless phones and cell phones as well as wireless computers and wi-fi networks generate this form of microwave radiation."

Additional symptoms of EHS include headaches, fatigue, difficulty concentrating, poor short-term memory, difficulty sleeping, skin problems, tinnitus, nausea, and dizziness. Many of these symptoms are subjective and difficult to measure.

Havas' study heralds the ability of health practitioners to determine if cardiac irregularities might be



triggered by electromagnetic radiation, using readily available assessment technology, before resorting to invasive or chemical symptom-suppressing cardiac therapeutics.

READ STUDY PUBLISHED IN THE EUROPEAN JOURNAL OF ONCOLOGY October 23, 2010

Dr. Havas is a world-renowned expert in electromagnetic fields. Her teaching and research is concerned with the biological effects of electromagnetic pollution including radio frequency radiation, electric and magnetic fields, dirty electricity and ground current. She is author of the BRAG Antenna Ranking of Schools Report, which teaches schools how radiation exposure from neighborhood cell phone towers and antennas can be assessed and remediated, Zory's Archives, an ongoing review of thousands of recently released studies on the biological effects of electromagnetic fields, dating back over a half century, drawn from U.S. government and military, and Russian and Eastern European, sources, and co-author of "Public Health SOS: The Shadow Side of the Wireless Revolution".



EXHIBIT D

STATEMENT FROM SANTA CRUZ COUNTY PUBLIC HEALTH  
OFFICIAL CITING RISKS OF SMARTMETER™ PROGRAM



# County of Santa Cruz

## HEALTH SERVICES AGENCY

POST OFFICE BOX 962, 1080 EMELINE AVE., SANTA CRUZ, CA 95061-0962  
TELEPHONE: (831) 454-4114 FAX: (831) 454-5049 TDD: (831) 454-4123

Poki Stewart Namkung, M.D., M.P.H.  
Health Officer  
Public Health Division

### Memorandum

Date: January 13, 2012  
To: Santa Cruz County Board of Supervisors  
From: Poki Stewart Namkung, M.D., M.P.H. *PON*  
Health Officer  
Subject: Health Risks Associated With SmartMeters

#### Overview

On December 13, 2011, Santa Cruz County Board of Supervisors directed the Public Health Officer to return on January 24, 2012, with an analysis of the research on the health effects of SmartMeters.

#### **Background**

In order to analyze the potential health risks associated with SmartMeters, the following questions should be asked:

- 1) What is the SmartMeter system and what is the potential radiation exposure from the system?
- 2) What scientific evidence exists about the potential health risks associated with SmartMeters?
- 3) Are there actions that the public might take to mitigate any potential harm from SmartMeters?

SmartMeters are a new type of electrical meter that will measure consumer energy usage and send the information back to the utility by a wireless signal in the form of pulsed frequencies within the 800 MHz to 2400MHz range, contained in the microwave portion of the electromagnetic spectrum. SmartMeters are considered part of 'smart grid' technology that includes: a) a mesh network or series of pole-mounted wireless antennas at the neighborhood level to collect and transmit wireless information from all SmartMeters in that area back to the utility; b) collector meters, which are a special type of SmartMeter that collects the radiofrequency or microwave radiation signals from many surrounding

buildings (500-5000 homes or buildings) and sends the information back to the utility; and c) proposed for the future, a power transmitter to measure the energy use of individual appliances (e.g. washing machines, clothes dryers, dishwasher, etc) and send information via wireless radio frequency signal back to the SmartMeter. The primary rationale for SmartMeters and grid networks is to more accurately monitor and direct energy usage

The public health issue of concern in regard to SmartMeters is the involuntary exposure of individuals and households to electromagnetic field (EMF) radiation. EMFs are everywhere, coming from both natural and man-made sources. The three broad classes of EMF are:

- extremely low frequency, ELF (from the sun or powerlines)
- radio frequency, RF (from communication devices, wireless devices, and SmartMeters)
- extremely high frequency, known as ionizing radiation (x-rays and gamma rays)

Much of this exposure is beyond our control and is a matter of personal choice; however, public exposure to RF fields is growing exponentially due to the proliferation of cell phones, and wireless fidelity (Wi-Fi) technology. To understand the relationship between EMF from SmartMeters and other sources, it is helpful to view the electromagnetic spectrum:

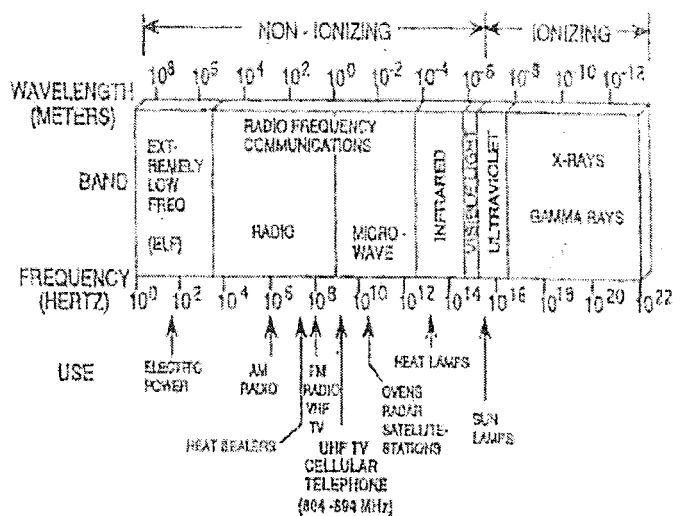


Fig. 1: The electromagnetic spectrum, showing the relation s between ELF and RF fields, wavelength and frequency, and the ionizing and non-ionizing portions of the spectrum

The Federal Communications Commission (FCC) has adopted limits for Maximum Permissible Exposure (MPE) that are based on exposure guidelines published by the National Council on Radiation Protection and Measurements (NCRP). The limits vary with

the frequency of the electromagnetic radiation and are expressed in units of microwatts per centimeter squared. A SmartMeter contains two antennas whose combined time-averaged public safety limit of exposure is  $655\mu\text{W}/\text{cm}^2$  (Sage, 2011). According to the California Council on Science and Technology (CCST) Report (2011), within distances of three to ten feet, SmartMeters would not exceed this limit. However, CCST did not account for the frequency of transmissions, reflection factors, banks of SmartMeters firing simultaneously, and distances closer than three feet. There are numerous situations in which the distance between the SmartMeters and humans is less than three feet on an ongoing basis, e.g. a SmartMeter mounted on the external wall to a bedroom with the bed placed adjacent to that mounting next to the internal wall. That distance is estimated to be one foot. The CCST Report also states that SmartMeters will generally transmit data once every four hours, and once the grid is fully functional, may transmit "more frequently." It has been aptly demonstrated by computer modeling and real measurement of existing meters that SmartMeters emit frequencies almost continuously, day and night, seven days a week. Furthermore, it is not possible to program them to not operate at 100% of a duty cycle (continuously) and therefore it should not be possible to state that SmartMeters do not exceed the time-averaged exposure limit. Additionally, exposure is additive and consumers may have already increased their exposures to radiofrequency radiation in the home through the voluntary use of wireless devices such as cell and cordless phones, personal digital assistants (PDAs), routers for internet access, home security systems, wireless baby surveillance (baby monitors) and other emerging devices. It would be impossible to know how close a consumer might be to their limit, making safety a uncertainty with the installation of a mandatory SmartMeter.

This report will focus on the documented health risks of EMF in general, the relevance of that data to SmartMeters exposure, the established guidelines for RF safety to the public at large, and then provide recommendations to ameliorate the risk to the public's health.

#### **Evidence-based Health Risks of EMFs**

There is no scientific literature on the health risks of SmartMeters in particular as they are a new technology. However, there is a large body of research on the health risks of EMFs. Much of the data is concentrated on cell phone usage and as SmartMeters occupy the same energy spectrum as cell phones and depending on conditions, can exceed the whole body radiation exposure of cell phones (see Attachment B1, Figure 4). In terms of health risks, the causal factor under study is RF radiation whether it be from cell phones, Wi-Fi routers, cordless phones, or SmartMeters. Therefore all available, peer-reviewed, scientific research data can be extrapolated to apply to SmartMeters, taking into consideration the magnitude and the intensity of the exposure.

Since the mid-1990's the use of cellular and wireless devices has increased exponentially exposing the public to massively increased levels of RF. There is however, debate regarding the health risks posed to the public given these increased levels of radiation. It must be noted that there is little basic science funding for this type of research and it is largely funded by industry. An intriguing divide, noted by Genuis, 2011 is that most

research carried out by independent non-government or non-industry affiliated researchers suggests potentially serious effects from many non-ionizing radiation exposures, most research carried out by independent non-government or non-industry affiliated researchers suggests potentially serious effects from many non-ionizing radiation exposures research funded by industry and some governments seems to cast doubt on the potential for harm. Elements of the controversy stem from inability to replicate findings consistently in laboratory animal studies. However, analysis of many of the conflicting studies is not valid as the methodology used is not comparable. Despite this controversy, evidence is accumulating on the results of exposure to RF at non-thermal levels including increased permeability of the blood-brain barrier in the head (Eberhardt, 2008), harmful effects on sperm, double strand breaks in DNA which could lead to cancer genesis (Phillips, 2011), stress gene activation indicating an exposure to a toxin (Blank, 2011), and alterations in brain glucose metabolism (Voikow, 2011).

In terms of meta-analyzed epidemiological studies, all case-control epidemiological studies covering >10 years of cell phone use have reported an increased risk of brain tumors from the use of mobile phones (Hallberg, 2011). Other studies have pointed to an increasing risk of acoustic neuroma, salivary gland tumors, and eye cancer after several years of cell phone use and the tumors occur predominantly on the same side of the head as the phone is used. The analysis of brain cancer statistics since the mid 20<sup>th</sup> century in several countries reveals that brain tumor formation has a long latency time, an average of over 30 years to develop from initial damage (Hallberg, 2011). Therefore using studies such as the Interphone Study which looked at shorter latency periods for the development of specific brain cancers will result in inconclusive data.

Another potential health risk related to EMF exposure, whose legitimacy as a phenomenon remains contentious, is electromagnetic hypersensitivity (EHS). In the 1950's, various centers in Eastern Europe began to describe and treat thousands of workers, generally employed in jobs involving microwave transmission. The afflicted individuals often presented with symptoms such as headaches, weakness, sleep disturbance, emotional instability, dizziness, memory impairment, fatigue, and heart palpitations. Clinical research to verify the physiological nature of this condition did not begin in earnest until the 1990's and found that the EMF involved was usually within the non-ionizing range of the electromagnetic spectrum. In the early 2000's, estimates of the occurrence of EHS began to swell with studies estimating the prevalence of this condition to be about 1.5% of the population of Sweden (Hilleert et al., 2002), 3.2% in California (Levallois et al., 2002), and 8% in Germany (infas Institut für angewandte Sozialwissenschaft GmbH, 2003).

In 2004, WHO declared EHS "a phenomenon where individuals experience adverse health effect while using or being in the vicinity of devices emanating electric, magnetic, or electromagnetic fields (EMFs)...Whatever its cause, EHS is a real and sometimes debilitating problem for the affected persons (Mild et al., 2004)."

Currently, research has demonstrated objective evidence to support the EHS diagnosis, defining pathophysiological mechanisms including immune dysregulation in vitro, with

increased production of selected cytokines and disruption and dysregulation of catecholamine physiology (Genuis, 2011).

Until recently, the diagnosis of EHS has not received much support from the medical community due to lack of objective evidence. In an effort to determine the legitimacy of EHS as a neurological disorder, however, a collection of scientists and physicians recently conducted a double-blinded research study that concluded that "EMF hypersensitivity can occur as a bona fide environmentally-inducible neurological syndrome (McCarty et al., 2011).

### Safety Guidelines

The guidelines currently used by the FCC were adopted in 1996, are thermally based, and are believed to protect against injury that may be caused by acute exposures that result in tissue heating or electric shock. FCC guidelines have a much lower certainty of safety than standards. Meeting the current FCC guidelines only assures that one should not have heat damage from SmartMeter exposure. It says nothing about safety from the risk of many chronic diseases that the public is most concerned about such as cancer, miscarriage, birth defects, semen quality, autoimmune diseases, etc. Therefore, when it comes to nonthermal effects of RF, FCC guidelines are irrelevant and cannot be used for any claims of SmartMeter safety unless heat damage is involved (Li, 2011).

There are no current, relevant public safety standards for pulsed RF involving chronic exposure of the public, nor of sensitive populations, nor of people with metal and medical implants that can be affected both by localized heating and by electromagnetic interference (EMI) for medical wireless implanted devices. Many other countries (9) have significantly lower RF/MW exposure standards ranging from 0.001 to 50  $\mu\text{W}/\text{cm}^2$  as compared with the US guideline of 200-1000  $\mu\text{W}/\text{cm}^2$ . Note that these recommended levels are considerably lower than the approximately 600  $\mu\text{W}/\text{cm}^2$  (time-averaged) allowed for the RFR from SmartMeters operating in the low 900 MHz band mandated by the FCC based on only thermal consideration.

In summary, there is no scientific data to determine if there is a safe RF exposure level regarding its non-thermal effects. The question for governmental agencies is that given the uncertainty of safety, the evidence of existing and potential harm, should we err on the side of safety and take the precautionary avoidance measures? The two unique features of SmartMeter exposure are: 1) universal exposure thus far because of mandatory installation ensuring that virtually every household is exposed; 2) involuntary exposure whether one has a SmartMeter on their home or not due to the already ubiquitous saturation of installation in Santa Cruz County. Governmental agencies for protecting public health and safety should be much more vigilant towards involuntary environmental exposures because governmental agencies are the only defense against such involuntary exposure. Examples of actions that the public might take to limit exposure to electromagnetic radiation can be found in Attachment B2.

**References:**

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EXHIBIT E

STUDY SHOWING IMPACTS TO MAMALIAN BRAIN RELATED  
TO LEARNING, MEMORY AND ALZHEIMER'S IMPACTED  
BY WHOLE EMF EXPOSURE

## **Greek Researchers Show Crucial Regions of the Brain Related to Learning, Memory, Alzheimer's Impacted by Whole Body EMF Exposure in Animals**

25.01.2012 by emily Category [Electromagnetic Health Blog](#)

A Greek scientific study led by Adamantia Fragopoulou and Lukas Margaritis has demonstrated important protein changes in the brain of animals following whole body exposure to RF electromagnetic fields, similar to the kind of microwave radiation emitted from cell phones, portable phones, WiFi and wireless computer equipment. The study, **“Brain proteome response following whole body exposure of mice to mobile phone or wireless DECT base radiation”**, was published in *[Electromagnetic Biology and Medicine](#)*, Early Online: 1–25, 2012 (See Abstract, below).

Important regions of the brain necessary for learning, memory and other functions of the mammalian brain were impacted by the microwave radiation, including the hippocampus, cerebellum and frontal lobe, at exposures below the ICNIRP (*International Commission on Non-Ionizing Radiation Protection*) safety

guidelines. A total of 143 proteins in the brain were impacted by the RF radiation over a period of 8 months, providing new evidence for a potential relationship between everyday cell phone use, wireless transmitters and wireless computer equipment and electrosensitivity symptoms, such as headaches, dizziness and sleep disorders, as well as with tumors, Alzheimer's and even metabolic effects.

The study simulated 3 hours of cell phone exposure over eight months, 8 hours of DECT portable phone exposure over eight months, and included a sham exposure control group. The results showed both down regulation and up regulation of the proteins.

TABLE 1 Number of differentially expressed proteins across three major brain regions, following long-term electromagnetic radiation exposure to conventional mobile phone (M) and DECT wireless base (B).

Proteins	Hippocampus		Frontal lobe		Cerebellum	
	B	M	B	M	B	M
Upregulated	11	37	12	19	8	36
Downregulated	11	33	11	18	10	18
Total number of proteins changed	22	70	23	37	18	54

Several **neural function related proteins** (i.e. Glial Fibrillary Acidic Protein (GFAP), Alpha-synuclein, Glia Maturation Factor beta (GMF), and apolipoprotein E (apoE)), heat shock proteins, and cytoskeletal proteins (i.e. neurofilaments and tropomodulin), were shown to be impacted by the radiation, as well as **proteins of the brain metabolism** (i.e. Aspartate aminotransferase, Glutamate dehydrogenase), in *nearly all of the brain regions studied*.

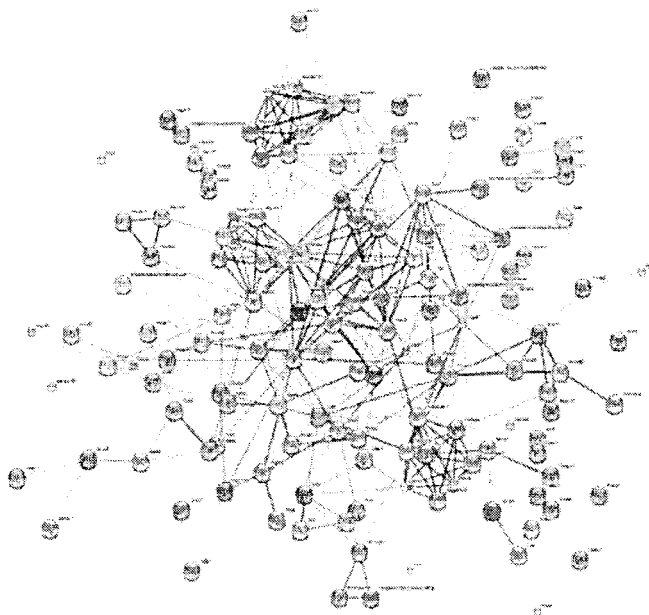


Figure 2 from the study shows the 143 proteins that have changed (up- or down-regulated) and their functional relationship based on a literature survey.



**Adamantia F. Fragopoulou, M.Sc., PhD Candidate, in the Dept of Cell Biology and Biophysics at University of Athens, Greece, lead author of the study, says,**

“Our study is important because it shows for the first time protein changes in the mouse brain after EMF exposure and in particular in very crucial regions like **hippocampus, cerebellum and frontal lobe**, all **involved in learning, memory and other complicated functions of the mammalian brain**. We have demonstrated that **143 proteins** are altered after electromagnetic radiation, including proteins that have been correlated so far with Alzheimer’s, glioblastoma, stress and metabolism. In its perspective, this study is anticipated to throw light in the understanding of such health effects like headaches, dizziness, sleep disorders, memory disorders, brain tumors, all of them related, to the function of the altered brain proteins.

“Until now there is limited evidence relating EMFs with the impact on specific brain proteins. Further analysis of the affected proteins as well as replicating the experiment under similar conditions (data presently under analysis) is expected to offer new insights explaining the overall effects.”



**Lukas H. Margaritis, PhD, Professor Emeritus (as of Sept 2010) of Cell Biology and Radiobiology, Dept of Cell Biology and Biophysics, University of Athens, head of the Athens research group, says,**

“A high throughput approach (mass characterization of biomolecules, similar to microarrays that analyze the total genes of an organism) as that of the **Proteomics\*** has never been used so far in **EMF research of BRAIN TISSUES** following whole body exposure of model animals (mice) at **SAR values below ICNIRP’s recommendations**. It is also the first time that wireless DECT phones base radiation is involved in lab animal studies and specifically in such molecular effects. The message taken out of this work is that people should be very cautious when using mobile phones next to their body (especially next to their brain), whereas the wireless DECT should be located as far away as possible from places that people use to spend many hours a day, not to mention children of all ages.”

*\* Proteomics is the study of the structure and function of proteins. Proteins are the primary components of the physiological metabolic pathways of all cells. They influence the functioning of all bodily systems, such as the immune system, endocrine system, neurological system (including cognitive function),*

*respiratory system, etc. Malfunction in protein integrity has been linked to hereditary diseases, nervous system disorders, diabetes, to name just a few cases. Proteins are responsible for energy production and information transfer, in fact modern CELL BIOLOGY considers that there is no single cellular function that is not mediated by proteins.*

The study by Fragopoulou et al. suggests immediate follow up on these findings are warranted, as changes in molecular effects in the brain can raise questions about what the effects would be on the brain ***after much longer durations*** of exposure to RF radiation, as is common today from frequent cell phone use and wireless exposures, as well as the ***effect of cumulative exposures*** on the brain and mental functioning; immune system defects; fatigue; chronic sleep disorders; and effects on fetuses and sperm quality. The research extends our understanding from the **Volkow et al. study** (*JAMA. 2011;305(8):808-813. doi: 10.1001/jama.2011.186*), which demonstrated impacts of cell phone radiation exposure on brain glucose metabolism, without understanding the mechanisms of action. The Fragopoulou et al. study presents a plausible theory why glucose metabolism in the brain may become altered, possibly through an oxidative stress effect.

### **Special Concern for Children**

Regarding the implications of the Greek findings for the learning capability of children in formative years, the authors say,

“The evidence for dysregulation of proteins in the brain from whole body exposure to RF/MW radiation, such as the radiation emitted by cell phones, portable phones, wireless devices or ambient RF/MW from cell towers, whether proteins are upregulated or downregulated, is of great concern for its impact on children’s capacity to learn. “

When considered together with other studies published by the University of Athens team (Fragopoulou et al. 2010, on **spatial memory disorder**, and Ntzouni et al. 2011 on **recognition memory disorders**, the authors say, “This proteome study implies that mobile phone radiation exposure at a normal intensity (and even below ICNIRP’s guidelines) is capable of detuning **learning/memory functions** and possibly other brain functions important **in person-to-person communication and understanding**. The impacts on society are unpredictable as EMFs are not a drug that is delivered to specific body parts or functions. EMFs can attack through oxidative stress every single cell that receives enough energy at non-thermal levels. The potential consequences for learning, memory and interpersonal relations, at the very least, need society’s immediate attention, given the widespread exposure to microwave radiation across the globe.”

People exposed to microwave radiation from cell phones, wireless networks and citywide Wi-Fi have long complained of cognitive difficulties ranging from attention problems, difficulty focusing, poor memory, visual and hearing disruptions, headaches, dizziness, depression and foggy thinking. The Fragopoulou et al. study deepens scientists’ understanding of the ***mechanisms of action*** of microwave radiation’s effect on the brain, and on mental functioning, due to changes in proteins and in protein functioning .

**Dr. Martin Blank, Associate Professor, Department of Physiology and Cellular Biophysics, Columbia University**, and Past President of the Bioelectromagnetics Society, says,

“The paper by Goodman and Henderson (1987) showed that short-term (minutes) exposure to EMF will

stimulate protein synthesis, and Fragopoulou et al. now show that this can lead to important changes in brain composition and function. Such changes may account for symptoms like insomnia, nervousness, fatigue, headaches, etc. that people report after exposure to cell phones and other wireless technologies. The biological verdict became obvious when Goodman and Blank (1994) showed that cells react to EMF as potentially harmful by activating the cellular stress response. There is no question that we should limit our exposure to EMF to help protect our brains and all cells in the body.”

### Studies Showing RF Effects Below Safety Guidelines

A growing body of research clearly shows health effects from microwave radiation *at non-thermal levels* of exposure, and effects at exposures far lower than international safety guidelines. One review of the literature, by Carlos Sosa, MD of Columbia, South America, found biological effects from non-thermal levels of EMF exposure at exposure levels well below international safety guidelines in several respects:

	Effects at:	Less Than Guidelines
Psychological changes	.03 W/kg	50x Less
Immune System Effects	.015 W/kg	100x Less
Increase Calcium Efflux	.005 W/kg	300x Less
DNA Damages	.0024W/kg	600x Less
Induces Stress Response	.0110 W/kg	1,600x Less
Affects BBB	.0004 W/kg	4,000x Less
Affects Cardia Ca	.00015 W/kg	10,600x Less
Enhances Cell Proliferation	.00002 W/kg	76,000x Less

Source: Carlos Sosa, MD

The UK charity MobileWise recently published *“Mobile phone health risks: the case for action to protect children”* in November 2011, summarizing and listing more than 200 peer-reviewed studies from a range of international research institutions linking mobile phones at non-thermal exposures to serious biological and health consequences.

A Russian team of researchers also has recently released a study published in **Radiation Biology, Radiation Ecology 2011, Volume 51, No.5, p 611-623** showing **significant long-term (4 years) cognitive decline in children** (ages 7-12) in users of mobile devices compared to controls, once again demonstrating exposure guidelines are inadequate. Lead author of the study, Professor Yury Grigoriev, Chairman of Russian National Committee on Non-Ionizing Radiation Protection and a member of the WHO’s International Advisory Committee on “EMF and Health”, says,

“Our recent 4-year monitoring of effects from cell phone radiation on children, published in Radiation Biology, Radiation Ecology (Volume 51, No.5, 2011), demonstrates an increase in phonemic perception disorders, abatement of efficiency, reduced indicators for the arbitrary and semantic memory and increased fatigue. Over the four-year monitoring of 196 children ages 7-12 who were users of mobile communication devices, a steady decline in these parameters from high values to bottom standards compared to controls, was observed. **The short-term and long-term potential consequences for society from exposing children to microwave radiation from cellular communication devices must be immediately acknowledged, globally, and**

responsibly addressed.”

A history of exposure standard setting in the telecommunications industry, The Procrustean Approach , by Don Maisch, PhD of EMF Facts in Australia, describes *‘the manipulation of telecommunications standards by political, military, and industrial vested interests at the expense of public health protection.’*

The Seletun Scientific Statement, a statement by international scientists in February 2011 (watch video), called for reduction EMF exposures globally to reflect the known biological effects at radiation exposures far lower than international guidelines in order to protect the public health and the health of future generations.

The recent Fragopoulou et al. research adds to the body of science demonstrating we are changing and disregulating biological functioning in the brain with the unchecked proliferation of RF electromagnetic fields from telecommunication and utility technologies. These effects are occurring at exposures below safety guidelines and the safety guidelines urgently need to be changed to protect public health.

**PRE-FILED DIRECT TESTIMONY**  
**OF [REDACTED]**  
**MPUC Docket No. 2011-00262**

1   **Q.   Please state your name and address.**

2   A.   [REDACTED]

3

4   **Q.   Was a CMP smart meter installed at your residence?  If so, state**  
5       **approximately the date when it was installed.**

6   A.   Smart meter was installed on February 1, 2012 at [REDACTED] Rd.

7   **Q.   If a smart meter was removed and replaced by an analog meter at your**  
8       **request, please describe the circumstances of your request or complaint to**  
9       **CMP and their response.**

10  A.   [REDACTED]:  I requested that the smart meter be replaced with the regular  
11       meter because my fiancé started with headaches everyday from April until an  
12       emergency surgery to remove a brain tumor (a fast growing glioblastoma tumor).  
13       Her chair was three feet from where the smart meter was installed outside.  The  
14       smart meter was replaced on August 8, 2012.

15  **Q.   If you do not currently have a smart meter, are you paying the opt-out fees?**

16  A.   [REDACTED]:  I was charged \$51.00 to replace the smart meter with the old  
17       meter and \$12.00 per month is added to current bills.

18  **Q.   Please describe why you do not want a smart meter at your residence.**

19       **Identify any health concerns you may have about smart meters and whether**



1        **these concerns are based upon any specific physical or medical conditions that**  
2        **you or any of your family members may have.**

3    A.    [REDACTED]: Our health concern is that this could have caused my death (very  
4        early). [REDACTED] had headaches constantly for some time also. The glioblastoma  
5        tumor I had removed on May 5<sup>th</sup> was cancerous and chemo meds and radiation  
6        treatments last 2 ½ months. One MRI after and clear right now.

7    **Q.    Do you experience electromagnetic sensitivity symptoms in proximity to radio**  
8        **frequency devices, such as Wi-Fi, microwave ovens, cell phones, cordless**  
9        **phones, smart meters or other devices? Please describe the symptoms and**  
10       **the circumstances when they occur.**

11   A.    As far as we know just the smart meter.

12   **Q.    If you have physical or medical conditions, including sensitivity to**  
13        **electromagnetic radiation, have these conditions been diagnosed? Identify**  
14        **the diagnosis or description of the condition.**

15   A.    No real answers as to whether smart meters caused the medical emergency.

16   [REDACTED]: To add I had an MRI at [REDACTED] Hospital in November  
17        2010 and results were normal – no tumors and no cancers.

18   **Q.    Has your physician or other medical care provider made any**  
19        **recommendations about exposure to electromagnetic devices, including smart**  
20        **meters?**

21   A.    No. I have not had a chance to discuss this with them. Both of us have a family  
22        doctor – Dr. [REDACTED], [REDACTED] Healthcare Center. Oncology for [REDACTED]

1 is Dr. [REDACTED], [REDACTED] Hospital. Radiation Oncology – Dr. [REDACTED]  
2 [REDACTED] for Cancer Care.

3 **Q. Have you observed any pets exhibiting adverse reactions to smart meter**  
4 **transmissions? Describe the circumstances.**

5 A. Our German Shepard did not stay around us in the living room and would constantly  
6 wet on the floor.

7 **Q. If you had a smart meter for a period of time and experienced or observed**  
8 **symptoms or adverse reactions, did those symptoms or adverse reactions cease**  
9 **when the smart meter was removed? Describe the circumstances.**

10 A. Yes. The headaches ended when the smart meter was removed. Tension slowed  
11 and we are feeling better.

12 **Q. Has your experience with smart meters caused any disruptions in your daily**  
13 **living? Please describe the circumstances?**

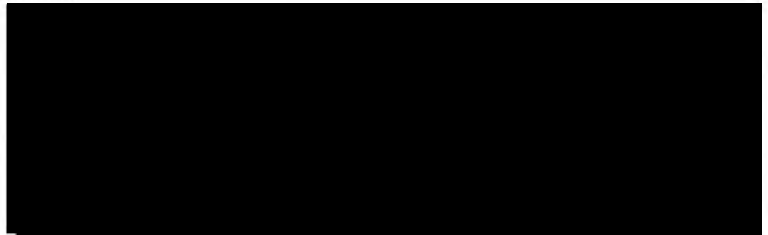
14 A. [REDACTED] had major loss of memory, confusion and headaches. [REDACTED] had major  
15 tension and headaches. Daily living was very hard. Starting in October, 2012, I  
16 will have an MRI done every three months and was told the tumor could come back.

17 **Q. Please tell us anything else that you want us or the Public Utilities Commission**  
18 **to know about your experiences and circumstances.**

19 A. We had an option not to have the smart meter installed and basically thought it  
20 would be okay. Unfortunately it was not. We got very behind on bills and had to  
21 pay and be broke. We still are, but still have to pay extra on the CMP bill each  
22 month. Before traveling to [REDACTED] radiation treatments we had to invest in a used

1 vehicle to travel as the vehicle we had prior could not get a new sticker, so we had to  
2 junk it.

Dated this 23<sup>rd</sup> day of January, 2013.

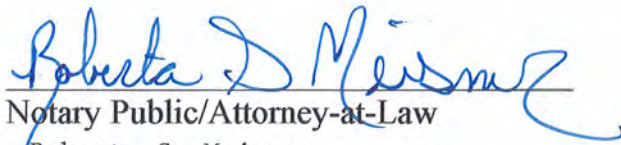


STATE OF MAINE

~~CUMBERLAND~~, ss:  
FRANKLIN

January 23, 2013

Personally appeared the above-named [REDACTED], and  
stated under oath that the foregoing Affidavit made by them is true and based upon their  
own personal knowledge, information or belief, and so far as upon information and belief,  
they believe the information to be true. Before me,

  
Notary Public/Attorney-at-Law  
Roberta S. Meisner

Name Typed or Printed

My Commission Expires: 02/24/2019

**ROBERTA S. MEISNER**  
Notary Public, Maine  
My Commission Expires February 24, 2019

PRE-FILED DIRECT TESTIMONY  
OF [REDACTED]  
MPUC Docket No. 2011-00262

1 Q. Please state your name and address.

2 A. [REDACTED]

3 Q. Was a smart meter installed at your residence? If so, state approximately the  
4 date when it was installed.

5 A. Yes, in late 2005, Central Hudson installed one for our weekend home in  
6 [REDACTED], New York, and in June, 2009, Con Edison installed one on our [REDACTED], New  
7 York residence.

8 In 2006, my husband, our two teenage sons, and I began spending weekends and  
9 vacations at our new house in [REDACTED]. There was an AMR (automatic meter reading)  
10 digital utility meter (DU) on a pole 100 feet from that house, which at the time, had no  
11 meaning for me, except that I occasionally saw a truck pull up to take a meter reading.  
12 AMR DU meters are an early version of "smart meters."

13 In June 2009, Con Edison installed an AMR electric transmitting digital meter on the  
14 outside of my home in [REDACTED] New York. They also installed a  
15 transmitting digital gas meter in my basement. The electric meter was labeled as  
16 follows:

17 Centron  
18 0716701200 CL200 240V 3W Type C1SRP 30TA 1.okh  
19 Ca. 0.5 FM 2s 60Hz  
20 A72AQ 7978929. 59689 345

21 I did not record the information from the Central Hudson AMR DU meter or from the  
22 Con Edison gas DU meter.

23 Q. Please describe any adverse reactions you have had to the smart meters.

24 A. From 2006 to 2009, when I was at our home in [REDACTED] I had sporadic and unusual  
25 heart palpitations, always at night, which would jolt me out of my sleep. This  
26 happened only when I was in [REDACTED]. In 2008, I went to my doctor for a check up and  
27 to have my heart tested. He found me in good health with nothing wrong with my  
28 heart. At that time, I did not know any information about the pulsing electromagnetic  
29 emissions from DU meters and that these meters were causing this type of reaction in  
30 other people.

1 For most of the summer of 2009, we traveled back and forth between [REDACTED] and  
2 [REDACTED]. I continued to have sporadic heart events.

3 After the summer months, we returned to [REDACTED], where an electric AMR DU meter  
4 had been installed in June 2009, and in September 2009 I began noticing the following  
5 unusual symptoms: Agitation, Memory and word loss, Inability to concentrate on my  
6 work, Nervousness, Unusual menstrual disruption; A mole began to grow larger on my  
7 back.

8 At 51, I wondered if I was developing an early form of Alzheimer's disease. I was not  
9 well, which at the time I described as feeling "unhinged," and I again went to my  
10 doctor but he did not know what was wrong with me.

11 In February 2010, during a major snowstorm in [REDACTED], I was in my living room,  
12 next to my fireplace, about five feet away from the electric AMR transmitting meter,  
13 outside my living room window. My husband was traveling and my sons were not at  
14 home. The electricity went on and off several times during that storm. Suddenly  
15 during one of these electrical events, I heard a very high pitched piercing sound in my  
16 right ear and I experienced painful pressure in both of my ears. This caused me to  
17 double over in pain.

18 Along with the symptoms I had been experiencing previously, as noted above, I began  
19 to develop worse symptoms: Severe heart palpitations; A loud and very disturbing  
20 buzzing-pulsing sound especially in my right ear; Extreme agitation; Interrupted sleep  
21 with nightmares of being attacked; Waking with severe heart palpitations; The mole on  
22 my back began to blow up and grow larger; Pains in my jaw and teeth.

23 I became terrified that I was going to die of a heart attack. I began to sleep on my  
24 kitchen floor so that the sound of the refrigerator would drown out the terrible buzzing  
25 in my ears. When I left [REDACTED] for [REDACTED], I had the same symptoms there. Some  
26 of the symptoms would lessen when I went outside, so I began to suspect that  
27 something was wrong inside, perhaps with the electricity.

28 After a conversation with an electrical specialist, I began to suspect that my symptoms  
29 might be traceable to the AMR DU meters that Central Hudson and Con Edison had  
30 installed. The DU meters were in fact the only newly introduced electrical and  
31 technical appliances in our homes.

32 Q. Did you have the smart meters removed? If so, please describe the  
33 circumstances of your request or complaint to the utility companies and their  
34 response.

35 A. In February 2010, after I became suspicious that the Radiofrequency/Microwave  
36 (RF/MW) radiation emissions from the AMR DU meters were making me sick, I

1 requested both Central Hudson and Con Edison to remove all AMR DU meters from  
2 both of my homes.

3 Central Hudson replaced the electric AMR DU meter with an analog meter.

4 Con Edison required me to get a letter from my doctor, which shocked me. I  
5 wondered how my personal medical information was the business of a utility  
6 company. Con Edison removed the gas AMR DU meter, but instead of replacing the  
7 electric AMR DU meter with an analog meter, they installed another electric DU  
8 meter, which they told me was not an AMR meter and had NO antenna or RF/MW  
9 radiation. They said that I would need to provide them, in the future, with meter  
10 readings. They also told me that I would be hearing from their health division, which  
11 I never did. Because at that time I was uneducated about both electromagnetic  
12 radiation and various meter types, I was grateful that Con Edison made the switch and  
13 I was hopeful that this new DU meter would have no effects on my health.

14 I recorded the following information from the second DU meter that Con Edison  
15 installed on my home.

16 Schlumberger Centron  
17 CL200 120V 3W Type CN15  
18 30TA 1.okh  
19 Ca. 0.5 FM 25S 60Hz  
20 HF5006914736AAV\*  
21 71BQ 6914736  
22 25 440 021

23 My symptoms became worse after the second DU meter was installed. I then pleaded  
24 with Con Edison to remove the second DU meter and I told them that "I might die" if  
25 they did not. Con Edison removed the second and final DU meter from my home on  
26 March 12, 2010, and replaced it with an analog meter.

27 **Q. Please explain why you wanted the smart meters removed.**

28 **A.** The only possible explanation for the change in my health was that new transmitting  
29 meters with unbearable and unrelenting radiofrequency radiation emissions had been  
30 installed in and on our home in [REDACTED] and in [REDACTED]

31 During the time that the AMR DU meters were on our homes, my husband developed  
32 high blood pressure and had to be placed on blood pressure medication. My family  
33 was unusually agitated during this time.

34 I have learned that other people in [REDACTED] also became ill after AMR DU meters were  
35 installed on their homes. None of them has been able to get the utility companies to  
36 remove the AMR meters despite vigorous requests for the utilities to do this. The

1 utilities claim the meters are safe and are flatly refusing to remove any meters, even  
2 when a letter from a doctor has been supplied asking for their removal.

3 When I asked the "Meter Relations" department (212-460-4111) at Con Edison if I  
4 could see a copy of the test results for human exposure to the  
5 radiofrequency/microwave (RF/MW) radiation from the meters, I was told that I must  
6 obtain a subpoena to acquire that information.

7 AMR electric meters are not Underwriter's Laboratory Approved, which means that  
8 state and federal agencies approved the meters but did not test them for health and  
9 safety and that is why Con Edison refused to answer my question. To the best of my  
10 knowledge no transmitting digital utility meters AMR or "smart" were tested for health  
11 and safety, yet the meters emit and transmit levels of RF/MW radiation, designated a  
12 Class 2B Carcinogen by the World Health organization.

13 **Q. Did your symptoms or adverse reactions cease when the smart meters were**  
14 **removed?**

15 **A.** Yes. In the hours following Con Edison's final removal of the last DU meter from my  
16 home my symptoms became less extreme. Specifically, on March 4, 2010, when Con  
17 Edison replaced the first AMR DU meter with another DU meter, my symptoms  
18 continued to worsen. My heart felt as if it was flipping in my chest. I was in a  
19 terrified state, unable to sleep and truly frightened that I would have a heart attack.  
20 After making many more calls to Con Edison, on March 12, 2010, Con Edison  
21 workers, including a manager of the meter department, came and removed the second  
22 electric DU meter from my house and finally replaced it with an analog meter.

23 My immediate responses to the removal of the DU meter were so remarkable that I  
24 recorded them.

25 I felt as if I were being released from being electrocuted; I felt weighted down with  
26 exhaustion; the buzzing-pulsing became quieter; I felt tingling in arms.  
27 Within hours I began feeling slightly better. The loud buzzing-pulsing did not go  
28 away but inside my house it got noticeably quieter. My thoughts became less  
29 scrambled.

30  
31 Within weeks: The mole on my back bled, dried up and fell off (documented by my  
32 dermatologist); I began to menstruate again, but never again normally as was the case  
33 before the meter was installed.

34 **Q. Are you paying opt-out fees?**

35 **A.** I have not been asked to pay opt-out fees by Central Hudson or Con Edison. I am,  
36 however, one of the only homeowners for whom both of these utility companies have  
37 removed the DU meters. As of today, both utility companies are refusing to remove

1 any DU meters, including for homeowners who have provided medical letters to the  
2 utilities.

3 Q. Do you or any of your family members experience electromagnetic sensitivity  
4 symptoms in proximity to radio frequency devices, such as Wi-Fi, microwave  
5 ovens, cell phones, cordless phones, other devices?

6 A. We had Wi-Fi, DECT portable phones, cell phones and fluorescent light bulbs for  
7 many years and to my knowledge they had never bothered me. Since this happened to  
8 me, I have physical symptoms, which at times are unbearable, when I am exposed to  
9 these devices.

10 My husband, two sons and I had lived in our homes with wireless internet, DECT  
11 phones and cell phones for many years. Our lives have been drastically altered since  
12 this happened to me. We have spent close to \$40,000 in electrical and medical bills  
13 since 2010, so that I can remain at home. Since being injured by the RF/MW  
14 radiation emissions from the DU meters, I am no longer able to physically tolerate  
15 wireless equipment.

16 The symptoms I have when I am in direct contact with some wireless equipment and  
17 some electrical equipment are: Splitting pain and pressure in my head and ears; My  
18 throat closes up; Loss of sleep; Loss of concentration; Ringing in my ears; Heart  
19 racing.

20 Since the DU meters, both my husband and my younger son have experienced periodic  
21 but mild reactions when near a cell tower. My son has experienced electrical  
22 sensations in his ears while going through his college library security system. My  
23 older son, who was attending [REDACTED] College in [REDACTED] the entire time the DU meters  
24 were on our home in [REDACTED] has not experienced physical symptoms when near  
25 wireless devices.

26 Q. Do you experience symptoms when you are near other smart meters?

27 I develop symptoms of tinnitus, heart racing and a pain in my head when I am as near  
28 as one foot and as far as 15 feet away from an AMR or smart DU meter, when it  
29 transmits or emits signals. I develop symptoms when I visit homes and buildings with  
30 AMR DU meters. I can no longer spend time at friend's homes, which have the  
31 meters. I feel symptoms outside in my neighborhood because there are meters  
32 everywhere. Using an HF35C Electrosnog Analyser, I can read a constant stream of  
33 varying levels of RF/MW signals from the meters. DU meters have a very distinct  
34 radiation ping sound. Contrary to what Con Edison has stated to me in writing, the  
35 particular electric DU meters used by Con Edison can send RF/MW signals once every  
36 one to two seconds and up to 30 seconds apart.



1 This "signal hopping" technology is a non-stop, 24/7, RF/MW exposure which  
2 surrounds people inside their homes and neighborhoods, with a pulsing/pinging  
3 RF/MW signal similar to that of a human heart. I no longer have an AMR meter on  
4 my home, but the RF/MW radiation continues to ping in my home through the  
5 electrical wiring from the AMR DU meters in my neighborhood.

6 **Q. Has your physician or other medical care provider made any recommendations**  
7 **about exposure to electromagnetic devices, including smart meters?**

8 A. I have seen several doctors and medical professionals about this problem since 2010  
9 and I have had my heart checked. My primary doctor, a homeopath M.D., has been  
10 very helpful for me.

11 My doctor has recommended that I should not have any DU meters of any type at my  
12 homes. He provided me with letters for both Con Edison and United Water stating  
13 that, because of my extreme sensitivity to electromagnetic radiation, I must not have  
14 any RF/MW emitting devices on my home. It is obvious from what has happened to  
15 me in the last two and a half years that when I am exposed to wireless and some  
16 electromagnetic radiation, I become ill. I am much healthier when I am not exposed  
17 to any wireless equipment.

18 Within a year of this happening to me and because of the strange and painful symptoms  
19 I was experiencing in my jaw and teeth, I sought out special dentists, one to remove a  
20 nickel post in a root canal in my upper jaw and the other to remove all of the metal  
21 dentistry, including mercury, cadmium, nickel and silver from my mouth. Although  
22 these sound like extreme measures, my research led me to believe that these  
23 procedures might relieve me of symptoms caused by electromagnetic radiation  
24 conducting through the metal in my mouth. This proved to be very helpful for me.

25 **Q. Has your experience with smart meters caused any disruptions in your daily**  
26 **living?**

27 A. My life has been dramatically changed since this whole nightmare started. In 2008, I  
28 was a fully functioning, working [REDACTED] and [REDACTED]. During that year I illustrated the  
29 book, [REDACTED]  
30 published by Rutgers University Press.

31 I have never yet returned to the level of work I was doing before I was injured by the  
32 radiation emissions from the DU meters. Wireless equipment and some electrical  
33 equipment make me feel sick. I can no longer use a cell phone, other than in an  
34 emergency. I can no longer use wireless Internet or be in a home or building for a  
35 long period of time, which uses Wi-Fi. I can no longer be near a person using a cell  
36 phone. I can no longer be near cell phone antennas, which means I can no longer go to  
37 our local farmer's market because of its close proximity to cell transmitters. I used to  
38 work in an artists studio with other artists, but I can no longer do that and I am now

1 very isolated. Traveling has become very difficult for me because Wi-Fi affects my  
2 sleep.

3 I can no longer attend village board meetings in [REDACTED] because of the cell  
4 transmitters on the roof. My life has changed very much. I consider myself very  
5 lucky that I have not lost my life, my family and my friends. I wish this had never  
6 happened to me.

7 **Q. Please tell us anything else that you want us or the Public Utilities Commission to**  
8 **know about your experiences and circumstances.**

9 **A.** I am living proof that DU meters, "radio on" or "radio off," make some people very  
10 sick. As my family and friends would attest to, I was perfectly happy using wireless  
11 technology and healthy in general before I was over-exposed to the extreme  
12 electromagnetic radiation from the DU meters.

13 Somewhere between the design and the manufacturing of all DU meters, something  
14 went terribly wrong and the radiation emissions from these flawed meters is far beyond  
15 what the utilities might have realized. Utility companies across the U.S. now know  
16 that some of their customers are becoming ill from this technology, yet they are  
17 holding on to this dangerous mistake because they invested billions of dollars into it.

18 The contamination of the electrical wiring from the meters must be investigated.

19 These are some of the questions that the utility companies must be required to answer  
20 and submit actual proof of their answers.

21 Were the meters tested for health and safety?

22 If so what was the testing method?

23 What are the levels and frequencies of RF/MW radiation that are being conducted on  
24 home and building electrical wiring?

25 What was the method of testing the RF/MW emissions?

26 What are the precise levels and frequencies of the RF emissions from the meters?

27 Were the meters tested in isolation?

28 Were the meters tested in combination with wireless electrical equipment such as  
29 Wi-Fi and DECT phones?

30 In a real life situation there might be electrical circuits in a home or building with  
31 faulty wiring, which could cause very high electromagnetic fields. Were the meters  
32 tested when attached to a home with faulty electrical wiring?

33 What happens when the conducted and pulsing RF/MW radiation from a "smart" meter  
34 contaminates wiring, which already has dangerous and high electromagnetic fields  
35 because of faulty wiring?

36 As far as I know there was never proper testing to determine the outcome of attaching

1 this flawed and dangerous technology to an entire home electrical system. We know  
2 for a fact that the particular AMR DU meters used in my area of New York were never  
3 properly tested. The fact is utility companies and state public service commissions  
4 jumped on this ill-conceived project without ever requiring proper testing for health  
5 and safety. When I asked Con Edison for the health and safety testing on the meters,  
6 they told me that I would need a subpoena for that and that I should contact the FCC.

7 The FCC has made it very clear to me that they are not in the health business but only  
8 the frequency business. We should not need to fight to be safe in our homes, safe  
9 from utility companies that are trying to bully their customers because of a \$10 billion  
10 mistake.

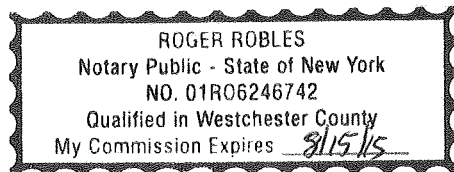
11 AMR and "smart" meters are flawed and dangerous technology. They must be  
12 recalled.

Dated this 18 day of January, 2013.

STATE OF NEW YORK  
WESTCHESTER, ss:

January 18, 2013

Personally appeared the above-named [REDACTED], and stated under oath that the foregoing Affidavit made by her is true and based upon her own personal knowledge, information or belief, and so far as upon information and belief, she believes the information to be true. Before me,



  
\_\_\_\_\_  
Notary Public/Attorney-at-Law

Name Typed or Printed

My Commission Expires:

08/15/15